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Client: Hart Crowser Inc. Project: 17800-36 Upper Columbia

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BC
Signature

November-27-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

November 28, 2012

Steve Hughes
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Upper Columbia 17800-36
ARI Job No. VR30

Dear Steve:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: eFile VR30

KFB/eb

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VR30

Sample Custody Record

VR30 1069

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 17800-360 LAB NUMBER

PROJECT NAME UPPER COLUMBIA

HART CROWSER CONTACT STEVE HUGHES

SAMPLED BY: PRC, SMF, WDM, KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	* METALS	TOC	** (EPA 9045)	TOTAL SOLIDS (SM 2540G)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	SA1-1C		10/30/12	1110	SOIL	X	X	X	X	1	
	SA1-2C	A 12/7/12		1547						1	
	SA1-3C			1611						1	
	SA1-3P-1 (0 to 3" depth)			1645						1	
	SA1-3P-2 (3 to 6" depth)			1650						1	
	SA1-3P-3 (6 to 12" depth)			1655						1	
	SA1-3P-4 (12 to 24" depth)			1700						1	
	SA1-4C			1335						1	
	SA1-5C			1304						1	
	SA1-6C			1059						1	
	SA1-7C			1435						1	
	SA1-8C			0915						1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Suzanne Faubl	11/7/12	SIGNATURE Chris Atwell	11-7-12
PRINT NAME Suzanne Faubl	TIME	PRINT NAME Ace	TIME
COMPANY Hart Crowser	0800	COMPANY	1130
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
* METALS - Ag, Al, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, Pb, K, Na, Sb, Se, Tl, V, Zn (METHOD 6010B | 6020)
Hg BY EPA 747 | A

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

12 TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE _____
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐48 HOURS ☒STANDARD
☐72 HOURS OTHER _____

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Hart Crowser Project Name: Upper Columbia

COC No(s): (NA) Delivered by Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No VR30 Tracking No NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? (YES) NO

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry): 2.9 4.7 5.1 3.8

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by JA Date: 11-07-12 Time: 1130

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other:

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? (YES) NO

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) JM (NO)

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs). (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI. (NA)

Was Sample Split by ARI: (NA) YES Date/Time: Equipment: Split by:

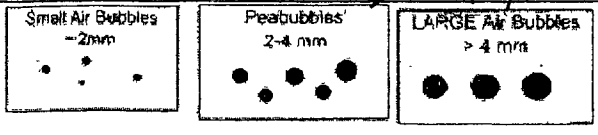
Samples Logged by: JM Date: 11/7/12 Time 1304

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
SA1-3P-2 (3-6" depth)	SA1-3P-1 (3-6" depth)		
SA1-3P-3 (6-12" depth)	SA1-3P-1 (6-12" depth)		
~~SA1-3P-2~~			

Additional Notes, Discrepancies, & Resolutions:

By JM Date: 11/7/12



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR30

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR30
November 28, 2012

Sample Receipt:

Please find enclosed the original chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted twelve soil samples in good condition on November 7, 2012. The samples were received with cooler temperatures between 2.9 and 5.1°C. Please see the Cooler Receipt Form for further details.

Total Metals by 200.8, 6010C and 7471A

The samples were digested on 11/13/12 and analyzed between 11/15/12 and 11/27/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): All method blanks were free of contamination.

LCS: Is in control.

Matrix spike/Sample Duplicate/RPD: The matrix spike is out of control low for antimony in association with sample SA1-1C.

Conventional Chemistry Parameters

The samples were analyzed between 11/12/12 and 11/19/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: There were no anomalies with these samples.

Method Blank(s): The method blank was free of contamination.

SRM/ LCS/ Sample Replicates: All percent recoveries and RPDs were in control.

Matrix spike/ Matrix spike duplicate/RPD (s): Are in control.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Hart Crowser, Inc.	**ARI Job No.:** VR30
Client Project: Upper Columbia	**Client Project No.:** 17800-36

Case Narrative

1. Twelve samples were received on November 7, 2012, and were in good condition.
2. The samples were submitted for separation of the less than 2mm material.
3. The samples were each placed in a clean tare and air-dried.
4. The samples were separated into two size fractions using a decontaminated, stainless steel #10 (2mm) sieve and sieve pan.
5. After separation, both size fractions were delivered to sample receiving for distribution.
6. There were no further anomalies in the samples or test method.

Released by: Yvonne Curtis Date: 11/13/12
Title: *Geotechnical Division Manager*

Reviewed by: [signature] Date: 11.14.2012
Title: *Lead Technician*

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR30
Client: Hart Crowser Inc.
Project Event: 17800-36
Project Name: Upper Columbia

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SA1-1C	VR30A	12-22165	Soil	10/30/12 11:10	11/07/12 11:30
2.	SA1-2C	VR30B	12-22166	Soil	10/30/12 15:47	11/07/12 11:30
3.	SA1-3C	VR30C	12-22167	Soil	10/30/12 16:11	11/07/12 11:30
4.	SA1-3P-1(0 to 3" depth)	VR30D	12-22168	Soil	10/30/12 16:45	11/07/12 11:30
5.	SA1-3P-2(3 to 6" depth)	VR30E	12-22169	Soil	10/30/12 16:50	11/07/12 11:30
6.	SA1-3P-3(6 to 12" depth)	VR30F	12-22170	Soil	10/30/12 16:55	11/07/12 11:30
7.	SA1-3P-4(12 to 24" depth	VR30G	12-22171	Soil	10/30/12 17:00	11/07/12 11:30
8.	SA1-4C	VR30H	12-22172	Soil	10/30/12 13:35	11/07/12 11:30
9.	SA1-5C	VR30I	12-22173	Soil	10/30/12 13:04	11/07/12 11:30
10.	SA1-6C	VR30J	12-22174	Soil	10/30/12 10:59	11/07/12 11:30
11.	SA1-7C	VR30K	12-22175	Soil	10/30/12 14:35	11/07/12 11:30
12.	SA1-8C	VR30L	12-22176	Soil	10/30/12 09:15	11/07/12 11:30

Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$
(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A

Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[4]	Solids[3]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[5]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[5]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(5) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VR30

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SA1-1C	VR30A	12-22165	
SA1-1CD	VR30ADUP	12-22165	
SA1-1CS	VR30ASPK	12-22165	
SA1-2C	VR30B	12-22166	
PBS	VR30MB1	12-22166	
LCSS	VR30MB1SPK	12-22166	
SA1-3C	VR30C	12-22167	
SA1-3P-1(0 to 3	VR30D	12-22168	
SA1-3P-2(3 to 6	VR30E	12-22169	
SA1-3P-3(6 to 12	VR30F	12-22170	
SA1-3P-4(12 to 24	VR30G	12-22171	
PBS	VR30MB2	12-22171	
LCSS	VR30MB2SPK	12-22171	
SA1-4C	VR30H	12-22172	
SA1-5C	VR30I	12-22173	
SA1-6C	VR30J	12-22174	
SA1-7C	VR30K	12-22175	
SA1-8C	VR30L	12-22176	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 11/21/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-1C
SAMPLE

Lab Sample ID: VR30A
LIMS ID: 12-22165
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 86.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.9	6	**21,700**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.014	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.097	0.2	**10.7**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.066	0.3	**665**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.020	0.2	**0.8**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.013	0.1	**3.3**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	2.1	6	**10,800**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.042	0.6	**47.1**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.036	0.2	**10.9**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.040	0.6	**25.0**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.83	6	**22,700**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.052	0.1	**158**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.5	6	**8,750**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.044	0.1	**2,320**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.008	**0.073**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.054	0.6	**33.6**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	19	60	**1,570**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.11	0.6	0.6	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0089	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.2	60	**150**	
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0033	0.2	**0.3**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.019	0.2	**35.7**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.38	4	**171**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-2C
SAMPLE

Lab Sample ID: VR30B
LIMS ID: 12-22166
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 93.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.2	10	**23,600**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**13.8**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**1,120**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**1.2**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.1**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.9	10	**7,500**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**29.8**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**12.3**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**18.2**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**40,800**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**84.9**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.6	10	**6,550**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**2,340**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.042**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**20.9**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	45	130	**1,820**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0082	0.2	0.2	U
3050B	11/13/12	6010C	11/16/12	7440-23-5	Sodium	2.7	130	130	U
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.2**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**42.5**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**227**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-3C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30C
LIMS ID: 12-22167
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 94.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**23,000**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**9.8**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**425**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**1.0**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.0**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**5,140**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**27.3**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.2**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**20.5**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**23,700**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**62.9**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**5,780**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**1,030**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.048**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**25.4**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,370**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**160**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**34.6**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**131**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA1-3P-1(0 to 3" depth)
SAMPLE

Lab Sample ID: VR30D
LIMS ID: 12-22168
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 91.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.3	10	**29,900**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**11.1**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.16	0.8	**404**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**1.1**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.2**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	5.0	10	**5,870**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**24.1**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**9.3**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**24.5**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	2.0	10	**24,600**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**75.6**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.6	10	**6,430**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.11	0.3	**857**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.008	**0.062**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**29.9**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	46	130	**1,410**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.2**	
3050B	11/13/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.8	130	**210**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**35.8**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**137**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA1-3P-2(3 to 6" depth)
SAMPLE

Lab Sample ID: VR30E
LIMS ID: 12-22169
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 95.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.8	10	**33,500**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**8.6**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**376**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**1.1**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.3**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**3,820**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**32.8**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.5**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**27.2**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**27,200**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**25.1**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**6,680**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.099	0.2	**428**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.039**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**28.0**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**1,400**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0077	0.2	**0.3**	
3050B	11/13/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**230**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**39.2**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**104**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: SA1-3P-3(6 to 12" depth)
SAMPLE

Lab Sample ID: VR30F
LIMS ID: 12-22170
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 94.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**34,400**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**9.5**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**326**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**1.1**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.4**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**3,530**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**27.6**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**9.9**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**32.3**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**26,800**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**20.8**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**6,550**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**512**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.049**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**32.4**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**1,420**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0079	0.2	**0.4**	
3050B	11/13/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**240**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**40.0**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**103**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA1-3P-4(12 to 24" depth)
SAMPLE

Lab Sample ID: VR30G
LIMS ID: 12-22171
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 95.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.6	10	**35,400**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.090	0.2	**7.9**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**288**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.019	0.2	**1.2**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.3**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**3,880**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**28.5**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**9.3**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**35.3**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**27,400**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**18.4**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**7,050**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.097	0.2	**449**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.058**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**26.3**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**1,440**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0082	0.2	**0.7**	
3050B	11/13/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**280**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.018	0.2	**37.5**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**98**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-4C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30H
LIMS ID: 12-22172
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 93.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.3	10	**26,800**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**9.4**	
3050B	11/13/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.16	0.8	**487**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.8**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.0**	
3050B	11/13/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.9	10	**3,690**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**21.8**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.1**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**15.0**	
3050B	11/13/12	6010C	11/16/12	**7439-89-6**	**Iron**	2.0	10	**22,100**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**37.6**	
3050B	11/13/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.6	10	**4,340**	
3050B	11/13/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**914**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.008	**0.044**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**23.4**	
3050B	11/13/12	6010C	11/16/12	**7440-09-7**	**Potassium**	45	130	**1,500**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/13/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.8	130	**200**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**32.3**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**147**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-5C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30I
LIMS ID: 12-22173
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 92.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.8	5	**17,900**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**16.9**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.065	0.3	**267**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.8**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.7**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	2.0	5	**5,000**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**23.5**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**8.3**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**19.6**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.81	5	**21,900**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**72.5**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.5	5	**5,230**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.043	0.1	**1,150**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.008	**0.046**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**19.9**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	19	50	**1,170**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0082	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**100**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**32.7**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**127**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-6C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30J
LIMS ID: 12-22174
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 92.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**20,600**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**21.2**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.060	0.3	**261**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.7**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.6**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**3,110**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**22.9**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**9.0**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**16.7**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.75	5	**22,500**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**89.4**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**5,030**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.040	0.1	**1,670**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.040**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**24.7**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,090**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0082	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**160**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**28.3**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**134**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-7C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30K
LIMS ID: 12-22175
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 94.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.7	5	**20,800**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.014	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.091	0.2	**12.6**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.062	0.3	**226**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.019	0.2	**0.7**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.013	0.1	**1.5**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	2.0	5	**5,720**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.040	0.5	**19.5**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.034	0.2	**7.1**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.038	0.5	**16.0**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.78	5	**20,700**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.049	0.1	**66.3**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**4,360**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.042	0.1	**1,120**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.049**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.051	0.5	**19.8**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	18	50	**1,220**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0084	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**200**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.018	0.2	**27.8**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.36	4	**150**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA1-8C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR30L
LIMS ID: 12-22176
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 94.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**16,500**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**10.4**	
3050B	11/13/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**399**	
3050B	11/13/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.7**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.0**	
3050B	11/13/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**5,280**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**14.7**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**6.0**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**14.3**	
3050B	11/13/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**17,200**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**81.7**	
3050B	11/13/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**3,670**	
3050B	11/13/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**1,330**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.059**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**13.1**	
3050B	11/13/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,170**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0082	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**100**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**23.0**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**150**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-1C
MATRIX SPIKE

Lab Sample ID: VR30A
LIMS ID: 12-22165
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Aluminum	6010C	21,700	20,400	222	-586%	H
Antimony	200.8	0.2 U	1.8	27.8	6.5%	N
Arsenic	200.8	10.7	38.3	27.8	99.3%	
Barium	6010C	665	863	222	89.2%	
Beryllium	200.8	0.8	30.8	27.8	108%	
Cadmium	200.8	3.3	30.6	27.8	98.2%	
Calcium	6010C	10,800	11,700	1,110	81.1%	H
Chromium	200.8	47.1	81.4	27.8	123%	
Cobalt	200.8	10.9	37.4	27.8	95.3%	
Copper	200.8	25.0	53.8	27.8	104%	
Iron	6010C	22,700	21,200	222	-676%	H
Lead	200.8	158	173	27.8	54.0%	H
Magnesium	6010C	8,750	8,300	1,110	-40.5%	H
Manganese	6010C	2,320	2,230	55.6	-162%	H
Mercury	7471A	0.073	0.142	0.0798	86.5%	
Nickel	200.8	33.6	64.7	27.8	112%	
Potassium	6010C	1,570	2,630	1,110	95.5%	
Selenium	200.8	0.6 U	86.0	89.0	96.6%	
Silver	200.8	0.2 U	24.5	27.8	88.1%	
Sodium	6010C	150	1,220	1,110	96.4%	
Thallium	200.8	0.3	29.0	27.8	103%	
Vanadium	200.8	35.7	67.3	27.8	114%	
Zinc	200.8	171	254	89.0	93.3%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: SA1-1C
DUPLICATE

Lab Sample ID: VR30A
LIMS ID: 12-22165
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Aluminum	6010C	21,700	19,700	9.7%	+/- 20%	
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	10.7	10.8	0.9%	+/- 20%	
Barium	6010C	665	612	8.3%	+/- 20%	
Beryllium	200.8	0.8	0.8	0.0%	+/- 0.2	L
Cadmium	200.8	3.3	3.2	3.1%	+/- 20%	
Calcium	6010C	10,800	10,100	6.7%	+/- 20%	
Chromium	200.8	47.1	47.5	0.8%	+/- 20%	
Cobalt	200.8	10.9	10.1	7.6%	+/- 20%	
Copper	200.8	25.0	24.4	2.4%	+/- 20%	
Iron	6010C	22,700	21,200	6.8%	+/- 20%	
Lead	200.8	158	152	3.9%	+/- 20%	
Magnesium	6010C	8,750	7,280	18.3%	+/- 20%	
Manganese	6010C	2,320	2,130	8.5%	+/- 20%	
Mercury	7471A	0.073	0.074	1.4%	+/- 20%	
Nickel	200.8	33.6	33.1	1.5%	+/- 20%	
Potassium	6010C	1,570	1,470	6.6%	+/- 20%	
Selenium	200.8	0.6 U	0.6 U	0.0%	+/- 0.6	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Sodium	6010C	150	140	6.9%	+/- 60	L
Thallium	200.8	0.3	0.3	0.0%	+/- 0.2	L
Vanadium	200.8	35.7	34.9	2.3%	+/- 20%	
Zinc	200.8	171	170	0.6%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR30LCS
LIMS ID: 12-22166
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	209	200	104%	
Antimony	200.8	25.9	25.0	104%	
Arsenic	200.8	26.0	25.0	104%	
Barium	6010C	209	200	104%	
Beryllium	200.8	27.5	25.0	110%	
Cadmium	200.8	26.0	25.0	104%	
Calcium	6010C	1010	1000	101%	
Chromium	200.8	26.4	25.0	106%	
Cobalt	200.8	26.5	25.0	106%	
Copper	200.8	26.6	25.0	106%	
Iron	6010C	218	200	109%	
Lead	200.8	27.6	25.0	110%	
Magnesium	6010C	1050	1000	105%	
Manganese	6010C	53.0	50.0	106%	
Mercury	7471A	0.130	0.143	90.9%	
Nickel	200.8	26.6	25.0	106%	
Potassium	6010C	990	1000	99.0%	
Selenium	200.8	83.1	80.0	104%	
Silver	200.8	25.2	25.0	101%	
Sodium	6010C	950	1000	95.0%	
Thallium	200.8	28.1	25.0	112%	
Vanadium	200.8	26.3	25.0	105%	
Zinc	200.8	85	80	106%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VR30MB
LIMS ID: 12-22166
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/13/12	200.8	11/15/12	7440-41-7	Beryllium	0.018	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	11/13/12	6010C	11/15/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/13/12	200.8	11/15/12	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-48-4	Cobalt	0.032	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-50-8	Copper	0.036	0.5	0.5	U
3050B	11/13/12	6010C	11/15/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/13/12	200.8	11/15/12	7439-92-1	Lead	0.047	0.1	0.1	U
3050B	11/13/12	6010C	11/15/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/13/12	6010C	11/15/12	7439-96-5	Manganese	0.040	0.1	0.1	U
CLP	11/13/12	7471A	11/17/12	7439-97-6	Mercury	0.0004	0.007	0.007	U
3050B	11/13/12	200.8	11/15/12	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	11/13/12	6010C	11/15/12	7440-09-7	Potassium	17	50	50	U
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/13/12	6010C	11/15/12	7440-23-5	Sodium	1.1	50	50	U
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-62-2	Vanadium	0.017	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-66-6	Zinc	0.34	4	4	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR30LCS
LIMS ID: 12-22171
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	205	200	102%	
Barium	6010C	206	200	103%	
Calcium	6010C	995	1000	99.5%	
Iron	6010C	215	200	108%	
Magnesium	6010C	1030	1000	103%	
Manganese	6010C	52.3	50.0	105%	
Potassium	6010C	980	1000	98.0%	
Sodium	6010C	940	1000	94.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: VR30MB
LIMS ID: 12-22171
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR30-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/15/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/13/12	6010C	11/15/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/13/12	6010C	11/15/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/13/12	6010C	11/15/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/13/12	6010C	11/15/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/13/12	6010C	11/15/12	7439-96-5	Manganese	0.040	0.1	0.1	U
3050B	11/13/12	6010C	11/15/12	7440-09-7	Potassium	17	50	50	U
3050B	11/13/12	6010C	11/15/12	7440-23-5	Sodium	1.1	50	50	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

FORM-I

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111571	2000.0	2034.01	**101.7**	2000.0	2057.15	**102.9**	2033.12	**101.7**	2049.61	**102.5**	2052.40	**102.6**	2039.87	**102.0**
Antimony	SB	PMS	MS111511	50.0	49.58	**99.2**	50.0	50.25	**100.5**	50.82	**101.6**	50.96	**101.9**	50.90	**101.8**	49.85	**99.7**
Arsenic	AS	PMS	MS111511	50.0	49.14	**98.3**	50.0	49.58	**99.2**	48.12	**96.2**	49.70	**99.4**	48.61	**97.2**	48.76	**97.5**
Barium	BA	ICP	IP111571	1000.0	1043.48	**104.3**	1000.0	1057.09	**105.7**	1055.45	**105.5**	1045.37	**104.5**	1046.10	**104.6**	1046.22	**104.6**
Beryllium	BE	PMS	MS111511	50.0	52.03	**104.1**	50.0	51.64	**103.3**	52.18	**104.4**	50.94	**101.9**	54.65	**109.3**	54.51	**109.0**
Cadmium	CD	PMS	MS111511	50.0	49.59	**99.2**	50.0	50.91	**101.8**	51.07	**102.1**	50.40	**100.8**	51.00	**102.0**	50.23	**100.5**
Calcium	CA	ICP	IP111571	2000.0	1953.19	**97.7**	2000.0	2000.11	**100.0**	1999.79	**100.0**	2134.09	**106.7**	2097.34	**104.9**	2118.65	**105.9**
Chromium	CR	PMS	MS111511	50.0	49.15	**98.3**	50.0	50.26	**100.5**	49.93	**99.9**	50.58	**101.2**	50.52	**101.0**	49.49	**99.0**
Cobalt	CO	PMS	MS111511	50.0	50.76	**101.5**	50.0	51.79	**103.6**	50.52	**101.0**	51.00	**102.0**	51.84	**103.7**	50.64	**101.3**
Copper	CU	PMS	MS111511	50.0	49.41	**98.8**	50.0	51.23	**102.5**	49.01	**98.0**	50.66	**101.3**	49.43	**98.9**	48.84	**97.7**
Iron	FE	ICP	IP111571	2000.0	2067.26	**103.4**	2000.0	2095.64	**104.8**	2075.64	**103.8**	2127.81	**106.4**	2136.92	**106.8**	2130.25	**106.5**
Lead	PB	PMS	MS111511	50.0	51.24	**102.5**	50.0	51.29	**102.6**	50.89	**101.8**	51.46	**102.9**	51.50	**103.0**	50.98	**102.0**
Magnesium	MG	ICP	IP111571	2000.0	2043.72	**102.2**	2000.0	2081.35	**104.1**	2065.21	**103.3**	2076.19	**103.8**	2082.19	**104.1**	2092.50	**104.6**
Manganese	MN	ICP	IP111571	1000.0	994.12	**99.4**	1000.0	1002.33	**100.2**	993.84	**99.4**	1010.52	**101.1**	1016.55	**101.7**	1063.59	**106.4**
Mercury	HG	CVA	HG111701	8.0	7.26	**90.8**	4.0	3.69	**92.3**	3.65	**91.3**	1.76	**44.0**	3.63	**90.8**	3.59	**89.8**
Nickel	NI	PMS	MS111511	50.0	49.09	**98.2**	50.0	50.47	**100.9**	48.27	**96.5**	49.43	**98.9**	48.80	**97.6**	48.90	**97.8**
Potassium	K	ICP	IP111571	20000.0	19903.24	**99.5**	20000.0	20061.06	**100.3**	19997.84	**100.0**	20053.11	**100.3**	20122.20	**100.6**	20301.61	**101.5**
Selenium	SE	PMS	MS111511	80.0	76.84	**96.1**	50.0	49.83	**99.7**	48.32	**96.6**	50.16	**100.3**	49.16	**98.3**	49.29	**98.6**
Silver	AG	PMS	MS111511	50.0	48.91	**97.8**	50.0	47.69	**95.4**	45.83	**91.7**	47.36	**94.7**	48.36	**96.7**	45.98	**92.0**
Sodium	NA	ICP	IP111571	50000.0	49381.76	**98.8**	50000.0	49573.31	**99.1**	49386.04	**98.8**	49271.59	**98.5**	49674.68	**99.3**	49803.59	**99.6**
Thallium	TL	PMS	MS111511	50.0	52.26	**104.5**	50.0	51.73	**103.5**	51.44	**102.9**	52.64	**105.3**	52.48	**105.0**	51.65	**103.3**
Vanadium	V	PMS	MS111511	50.0	50.37	**100.7**	50.0	49.83	**99.7**	48.87	**97.7**	49.80	**99.6**	50.19	**100.4**	49.71	**99.4**
Zinc	ZN	PMS	MS111511	50.0	49.08	**98.2**	50.0	49.71	**99.4**	49.06	**98.1**	50.87	**101.7**	49.72	**99.4**	47.97	**95.9**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111571	2000.0	2030.56	101.5	2043.68	102.2								
Antimony	SB	PMS	MS111511	50.0	50.55	101.1										
Arsenic	AS	PMS	MS111511	50.0	48.54	97.1										
Barium	BA	ICP	IP111571	1000.0	1030.78	103.1	1031.76	103.2								
Beryllium	BE	PMS	MS111511	50.0	55.41	110.8										
Cadmium	CD	PMS	MS111511	50.0	50.81	101.6										
Calcium	CA	ICP	IP111571	2000.0	2100.18	105.0	1991.74	99.6								
Chromium	CR	PMS	MS111511	50.0	49.57	99.1										
Cobalt	CO	PMS	MS111511	50.0	50.73	101.5										
Copper	CU	PMS	MS111511	50.0	48.37	96.7										
Iron	FE	ICP	IP111571	2000.0	2145.42	107.3	2167.62	108.4								
Lead	PB	PMS	MS111511	50.0	51.44	102.9										
Magnesium	MG	ICP	IP111571	2000.0	2051.61	102.6	2080.47	104.0								
Manganese	MN	ICP	IP111571	1000.0	1062.61	106.3	1022.52	102.3								
Mercury	HG	CVA	HG111701	4.0	3.60	90.0	3.64	91.0	3.61	90.3	3.56	89.0	3.71	92.8	3.72	93.0
Nickel	NI	PMS	MS111511	50.0	48.10	96.2										
Potassium	K	ICP	IP111571	20000.0	20222.70	101.1	20015.25	100.1								
Selenium	SE	PMS	MS111511	50.0	49.24	98.5										
Silver	AG	PMS	MS111511	50.0	45.76	91.5										
Sodium	NA	ICP	IP111571	50000.0	49591.73	99.2	49095.69	98.2								
Thallium	TL	PMS	MS111511	50.0	52.17	104.3										
Vanadium	V	PMS	MS111511	50.0	50.17	100.3										
Zinc	ZN	PMS	MS111511	50.0	48.94	97.9										

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111671	2000.0	1993.69	**99.7**	2000.0	2097.56	**104.9**	2041.11	**102.1**	2092.74	**104.6**	2083.91	**104.2**		
Barium	BA	ICP	IP111671	1000.0	1018.64	**101.9**	1000.0	1041.05	**104.1**	1040.26	**104.0**	1080.46	**108.0**	1068.00	**106.8**		
Beryllium	BE	PMS	MS111611	50.0	49.89	**99.8**	50.0	50.03	**100.1**	50.41	**100.8**	50.48	**101.0**				
Calcium	CA	ICP	IP111671	2000.0	1908.96	**95.4**	2000.0	1978.86	**98.9**	1948.46	**97.4**	2125.08	**106.3**	2028.08	**101.4**		
Iron	FE	ICP	IP111671	2000.0	2000.63	**100.0**	2000.0	2124.56	**106.2**	2043.91	**102.2**	2138.97	**106.9**	2128.52	**106.4**		
Magnesium	MG	ICP	IP111671	2000.0	1991.52	**99.6**	2000.0	2083.31	**104.2**	2041.91	**102.1**	2105.19	**105.3**	2112.69	**105.6**		
Manganese	MN	ICP	IP111671	1000.0	983.41	**98.3**	1000.0	987.07	**98.7**	986.80	**98.7**	1060.71	**106.1**	1007.27	**100.7**		
Potassium	K	ICP	IP111671	20000.0	19701.02	**98.5**	20000.0	19744.17	**98.7**	19949.30	**99.7**	20493.51	**102.5**	20090.12	**100.5**		
Sodium	NA	ICP	IP111671	50000.0	48621.30	**97.2**	50000.0	48657.79	**97.3**	49021.38	**98.0**	52938.44	**105.9**	49020.90	**98.0**		

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Aluminum	AL	ICP	IP111571	50.0	52.93	**105.9**	50.87	**101.7**	46.58	**93.2**						
Antimony	SB	PMS	MS111511	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS111511	0.2	0.19	**95.0**										
Barium	BA	ICP	IP111571	3.0	3.20	**106.7**	1.91	**63.7**	3.33	**111.0**						
Beryllium	BE	PMS	MS111511	0.2	0.22	**110.0**										
Cadmium	CD	PMS	MS111511	0.1	0.12	**120.0**										
Calcium	CA	ICP	IP111571	50.0	47.15	**94.3**	50.24	**100.5**	49.52	**99.0**						
Chromium	CR	PMS	MS111511	0.5	0.61	**122.0**										
Cobalt	CO	PMS	MS111511	0.2	0.21	**105.0**										
Copper	CU	PMS	MS111511	0.5	0.54	**108.0**										
Iron	FE	ICP	IP111571	50.0	53.86	**107.7**	57.87	**115.7**	58.59	**117.2**						
Lead	PB	PMS	MS111511	0.1	0.12	**120.0**										
Magnesium	MG	ICP	IP111571	50.0	51.09	**102.2**	54.00	**108.0**	55.54	**111.1**						
Manganese	MN	ICP	IP111571	1.0	1.15	**115.0**	1.24	**124.0**	1.27	**127.0**						
Mercury	HG	CVA	HG111701	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS111511	0.5	0.52	**104.0**										
Potassium	K	ICP	IP111571	500.0	471.13	**94.2**	499.91	**100.0**	482.53	**96.5**						
Selenium	SE	PMS	MS111511	0.5	0.58	**116.0**										
Silver	AG	PMS	MS111511	0.2	0.20	**100.0**										
Sodium	NA	ICP	IP111571	500.0	468.93	**93.8**	469.84	**94.0**	469.27	**93.9**						
Thallium	TL	PMS	MS111511	0.2	0.22	**110.0**										
Vanadium	V	PMS	MS111511	0.2	0.23	**115.0**										
Zinc	ZN	PMS	MS111511	4.0	4.42	**110.5**										
Aluminum	AL	ICP	IP111671	50.0	60.56	**121.1**	59.46	**118.9**	60.85	**121.7**						
Barium	BA	ICP	IP111671	3.0	2.28	**76.0**	2.93	**97.7**	2.29	**76.3**						
Beryllium	BE	PMS	MS111611	0.2	0.20	**100.0**										
Calcium	CA	ICP	IP111671	50.0	47.91	**95.8**	50.54	**101.1**	51.28	**102.6**						
Iron	FE	ICP	IP111671	50.0	53.99	**108.0**	57.63	**115.3**	62.83	**125.7**						
Magnesium	MG	ICP	IP111671	50.0	54.79	**109.6**	58.12	**116.2**	51.93	**103.9**						
Manganese	MN	ICP	IP111671	1.0	0.86	**86.0**	1.06	**106.0**	0.92	**92.0**						
Potassium	K	ICP	IP111671	500.0	501.15	**100.2**	506.23	**101.2**	498.77	**99.8**						
Sodium	NA	ICP	IP111671	500.0	471.16	**94.2**	475.77	**95.2**	466.00	**93.2**						

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111571	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111571	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111571	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111571	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.4	B
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Sodium	NA	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

00023 - 00015

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111571	200.0	50.0	50.0	U	50.0	U								
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U										
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U										
Barium	BA	ICP	IP111571	200.0	3.0	3.0	U	3.0	U								
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U										
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U										
Calcium	CA	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U								
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U										
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U										
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U										
Iron	FE	ICP	IP111571	100.0	50.0	50.0	U	50.0	U								
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U										
Magnesium	MG	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U								
Manganese	MN	ICP	IP111571	15.0	1.0	1.0	U	1.0	U								
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U										
Potassium	K	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U								
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U										
Silver	AG	PMS	MS111511	10.0	0.2	0.2	U										
Sodium	NA	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U								
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U										
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U										
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U										

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U		
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U		
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U		
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U		

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ICS SOURCE: I.V.

RUNID: IP111571

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198213.3	199849.8	**99.9**	196495.1	198205.3	**99.1**			
Antimony		1000	6.7	989.8	**99.0**	5.5	1022.9	**102.3**			
Arsenic		1000	15.7	970.2	**97.0**	16.0	1017.4	**101.7**			
Barium		1000	-0.7	1042.9	**104.3**	-0.9	1021.4	**102.1**			
Beryllium		1000	0.1	949.6	**95.0**	0.1	985.8	**98.6**			
Boron			-0.3	-2.2		-2.4	-1.7				
Cadmium		1000	0.1	1016.9	**101.7**	-0.2	1058.3	**105.8**			
Calcium	100000	100000	99373.3	100656.7	**100.7**	99965.3	102432.0	**102.4**			
Chromium		1000	-0.7	1034.6	**103.5**	-0.6	1047.2	**104.7**			
Cobalt		1000	0.1	995.9	**99.6**	0.0	1022.6	**102.3**			
Copper		1000	-0.2	1028.2	**102.8**	-0.8	1070.0	**107.0**			
Iron	200000	200000	193137.0	195376.0	**97.7**	199762.4	204939.7	**102.5**			
Lead		1000	2.7	934.3	**93.4**	1.5	965.4	**96.5**			
Magnesium	100000	100000	103217.4	100248.4	**100.2**	104176.4	101168.3	**101.2**			
Manganese		1000	0.4	977.9	**97.8**	0.8	1015.0	**101.5**			
Molybdenum			1.1	1.2		1.2	1.2				
Nickel		1000	0.1	953.7	**95.4**	-1.2	960.3	**96.0**			
Potassium			-1.8	-39.1		-3.7	-53.6				
Selenium		1000	15.7	956.9	**95.7**	15.3	1004.3	**100.4**			
Silicon			-1.9	-0.5		-5.0	-3.0				
Silver		1000	-1.2	967.1	**96.7**	-1.3	1002.2	**100.2**			
Sodium			10.6	26.5		6.1	20.3				
Strontium			3.9	3.9		4.0	4.0				
Thallium		1000	-3.7	902.3	**90.2**	-1.2	922.0	**92.2**			
Tin			-8.6	-8.1		-7.5	-6.5				
Titanium			2.5	2.4		2.1	1.7				
Vanadium		1000	4.4	980.1	**98.0**	5.5	1017.6	**101.8**			
Zinc		1000	4.5	944.4	**94.4**	3.9	973.3	**97.3**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: MS111511

SDG: VR30

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.8	**99.0**						
Chromium		20	0.6	20.1	**100.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.9	20.6	**103.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	417.3	421.0	**105.3**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	20.3	**101.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	0.9	20.0	**100.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ICS SOURCE: I.V.

RUNID: IP111671

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198988.9	194148.2	**97.1**	203627.5	201946.1	**101.0**			
Antimony		1000	7.7	1012.6	**101.3**	8.0	1038.6	**103.9**			
Arsenic		1000	14.3	976.4	**97.6**	15.8	1005.5	**100.6**			
Barium		1000	-1.8	1005.3	**100.5**	-1.6	1064.1	**106.4**			
Beryllium		1000	0.2	934.2	**93.4**	0.2	976.8	**97.7**			
Boron			-0.6	-1.5		-2.7	-3.3				
Cadmium		1000	-0.3	1022.7	**102.3**	-0.2	1037.5	**103.8**			
Calcium	100000	100000	97594.0	97457.4	**97.5**	101854.7	102165.0	**102.2**			
Chromium		1000	-2.2	1004.0	**100.4**	-1.5	1056.9	**105.7**			
Cobalt		1000	-0.8	992.3	**99.2**	-0.9	1021.2	**102.1**			
Copper		1000	-0.1	1023.3	**102.3**	0.3	1032.4	**103.2**			
Iron	200000	200000	191940.1	191119.7	**95.6**	198295.7	198558.1	**99.3**			
Lead		1000	2.2	960.2	**96.0**	1.0	986.9	**98.7**			
Magnesium	100000	100000	102481.1	97554.2	**97.6**	105578.5	102153.7	**102.2**			
Manganese		1000	0.5	957.2	**95.7**	0.7	994.8	**99.5**			
Molybdenum			1.2	0.8		1.8	1.2				
Nickel		1000	0.1	937.2	**93.7**	0.4	986.2	**98.6**			
Potassium			7.7	-29.1		14.4	-8.2				
Selenium		1000	16.9	967.0	**96.7**	17.4	997.2	**99.7**			
Silicon			-1.6	-0.9		-1.4	0.1				
Silver		1000	-0.7	985.5	**98.6**	-0.8	999.7	**100.0**			
Sodium			16.3	30.9		10.2	26.9				
Strontium			3.9	3.7		3.9	3.9				
Thallium		1000	-0.6	911.1	**91.1**	-4.1	937.3	**93.7**			
Tin			-7.6	-7.5		-8.7	-9.2				
Titanium			2.7	2.0		2.4	2.2				
Vanadium		1000	3.7	978.0	**97.8**	3.8	997.6	**99.8**			
Zinc		1000	4.1	914.7	**91.5**	4.1	970.4	**97.0**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ICS SOURCE: I.V.

RUNID: MS111611

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.7	**98.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.7	**98.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	18.9	**94.5**						
Copper		20	1.2	20.9	**104.5**						
Manganese		20	0.1	19.4	**97.0**						
Molybdenum	400	400	449.1	461.4	**115.4**						
Nickel		20	0.4	20.0	**100.0**						
Selenium			-0.4	-0.4							
Silver		20	0.0	22.0	**110.0**						
Vanadium			0.1	0.1							
Zinc		20	1.7	19.8	**99.0**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR30

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	SA1-1CA	VR30APOST	MS111511	457.64	B	1000.00	U	500	Soil	**91.5**

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: ICP

SDG: VR30

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Aluminum	SA1-1CL	VR30A-L	Soil	IP111571	196113.81		194633.70		0.8	
Barium	SA1-1CL	VR30A-L	Soil	IP111571	6004.54		6072.65		1.1	
Calcium	SA1-1CL	VR30A-L	Soil	IP111571	97702.31		98741.85		1.1	
Iron	SA1-1CL	VR30A-L	Soil	IP111571	205231.25		209125.15		1.9	
Magnesium	SA1-1CL	VR30A-L	Soil	IP111571	78964.23		79203.80		0.3	
Manganese	SA1-1CL	VR30A-L	Soil	IP111571	20960.75		21296.75		1.6	
Potassium	SA1-1CL	VR30A-L	Soil	IP111571	14196.32		13852.20	B	2.4	
Sodium	SA1-1CL	VR30A-L	Soil	IP111571	1393.98	B	2500.00	U	100.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR30

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	SA1-1CL	VR30A-L	Soil	MS111511	0.11	U	0.20	B		
Arsenic	SA1-1CL	VR30A-L	Soil	MS111511	9.64	B	9.65	B	0.1	
Beryllium	SA1-1CL	VR30A-L	Soil	MS111511	0.74	B	0.75	B	1.4	
Cadmium	SA1-1CL	VR30A-L	Soil	MS111511	2.97	B	3.05	B	2.7	
Chromium	SA1-1CL	VR30A-L	Soil	MS111511	42.38		44.80	B	5.7	
Cobalt	SA1-1CL	VR30A-L	Soil	MS111511	9.77	B	10.75	B	10.0	
Copper	SA1-1CL	VR30A-L	Soil	MS111511	22.54	B	22.80	B	1.2	
Lead	SA1-1CL	VR30A-L	Soil	MS111511	141.78		146.40		3.3	
Nickel	SA1-1CL	VR30A-L	Soil	MS111511	30.27	B	30.30	B	0.1	
Selenium	SA1-1CL	VR30A-L	Soil	MS111511	-0.01	U	0.65	B		
Silver	SA1-1CL	VR30A-L	Soil	MS111511	0.11	U	0.15	B		
Thallium	SA1-1CL	VR30A-L	Soil	MS111511	0.26	B	0.30	B	15.4	
Vanadium	SA1-1CL	VR30A-L	Soil	MS111511	32.11	B	34.05	B	6.0	
Zinc	SA1-1CL	VR30A-L	Soil	MS111511	153.55		162.00		5.5	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

IDL DATE: 4/1/2012

ICP LR DATE: 7/30/2012

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	ICP LINEAR RANGE (ug/L)
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	250000.0
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	100000.0
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	500000.0
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	250000.0
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	500000.0
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	30000.0
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	500000.0
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	5000000.0
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	4/1/2012	250000.0	7/30/2012
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

IEC DATE: 11/12/2012

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0581760	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1637240
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0091790	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0392710
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0130090
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0442360
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2393490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0412430
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5321920
Manganese	257.61	0.0046450	0.0000000	0.0000000	0.0000000	0.0019080	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054280
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0108090	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1069480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1236770	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0477260	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0349450
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

IEC DATE: 11/12/2012

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0863140	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0084630	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1197150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-1C	VR30A	1.043	0.0	50.0
SA1-1CD	VR30ADUP	1.043	0.0	50.0
SA1-1CS	VR30ASPK	1.040	0.0	50.0
SA1-2C	VR30B	1.039	0.0	50.0
SA1-3C	VR30C	1.070	0.0	50.0
SA1-3P-1(0 to 3	VR30D	1.039	0.0	50.0
SA1-3P-2(3 to 6	VR30E	1.059	0.0	50.0
SA1-3P-3(6 to 12	VR30F	1.047	0.0	50.0
SA1-3P-4(12 to 24	VR30G	1.079	0.0	50.0
SA1-4C	VR30H	1.021	0.0	50.0
SA1-5C	VR30I	1.004	0.0	50.0
SA1-6C	VR30J	1.085	0.0	50.0
SA1-7C	VR30K	1.023	0.0	50.0
SA1-8C	VR30L	1.081	0.0	50.0
PBS	VR30MB1	1.000	0.0	50.0
LCSS	VR30MB1SPK	1.000	0.0	50.0
PBS	VR30MB2	1.000	0.0	50.0
LCSS	VR30MB2SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-1C	VR30A	1.040	0.0	50.0
SA1-1CD	VR30ADUP	1.039	0.0	50.0
SA1-1CS	VR30ASPK	1.039	0.0	50.0
SA1-2C	VR30B	1.047	0.0	50.0
SA1-3C	VR30C	1.078	0.0	50.0
SA1-3P-1(0 to 3	VR30D	1.091	0.0	50.0
SA1-3P-2(3 to 6	VR30E	1.093	0.0	50.0
SA1-3P-3(6 to 12	VR30F	1.073	0.0	50.0
SA1-3P-4(12 to 24	VR30G	1.020	0.0	50.0
SA1-4C	VR30H	1.067	0.0	50.0
SA1-5C	VR30I	1.061	0.0	50.0
SA1-6C	VR30J	1.058	0.0	50.0
SA1-7C	VR30K	1.015	0.0	50.0
SA1-8C	VR30L	1.042	0.0	50.0
PBS	VR30MB1	1.000	0.0	50.0
LCSS	VR30MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-1C	VR30A	0.726	0.0	50.0
SA1-1CD	VR30ADUP	0.726	0.0	50.0
SA1-1CS	VR30ASPK	0.724	0.0	50.0
SA1-2C	VR30B	0.740	0.0	50.0
SA1-3C	VR30C	0.740	0.0	50.0
SA1-3P-1(0 to 3	VR30D	0.706	0.0	50.0
SA1-3P-2(3 to 6	VR30E	0.740	0.0	50.0
SA1-3P-3(6 to 12	VR30F	0.716	0.0	50.0
SA1-3P-4(12 to 24	VR30G	0.740	0.0	50.0
SA1-4C	VR30H	0.711	0.0	50.0
SA1-5C	VR30I	0.714	0.0	50.0
SA1-6C	VR30J	0.723	0.0	50.0
SA1-7C	VR30K	0.725	0.0	50.0
SA1-8C	VR30L	0.730	0.0	50.0
PBS	VR30MB1	0.700	0.0	50.0
LCSW	VR30MB1SPK	0.700	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/15/2012

SDG: VR30 | RUNID: IP111571 | METHOD: ICP | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08441			X			X		X					X		X	X	X		X											
S2	S2	1.00	08482						X											X													
S3	S3	1.00	08500																														
S4	S4	1.00	08524																														
S5	S5	1.00	08545			X					X					X		X	X			X											
ICV	ICV	1.00	08584			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09025			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09070			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09112			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09154			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09203			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09254			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40MB1	2.00	09441																														
ZZZZZZ	VS40B	5.00	09483																														
ZZZZZZ	VS40C	5.00	09530																														
ZZZZZZ	VS40D	5.00	09572																														
ZZZZZZ	VS40E	5.00	10014																														
ZZZZZZ	VS40F	5.00	10061																														
ZZZZZZ	VS40ADUP	5.00	10103																														
ZZZZZZ	VS40A	5.00	10145																														
ZZZZZZ	VS40ASPK	5.00	10191																														
ZZZZZZ	VS40MB1SPK	2.00	10231																														
CCV	CCV2	1.00	10271			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10322			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40G	5.00	10364																														
ZZZZZZ	VS40H	5.00	10410																														
ZZZZZZ	VS40I	5.00	10450																														
ZZZZZZ	VS40J	5.00	10491																														
ZZZZZZ	VS40F	10.00	10532																														
CCV	CCV3	1.00	10573			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	11024			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40H	10.00	11070																														
ZZZZZZ	VS40I	10.00	11112																														
ZZZZZZ	VS40J	10.00	11153																														
CCV	CCV4	1.00	11195			X			X		X					X		X	X	X		X											

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: OPTIMA ICP 2 START DATE: 11/15/2012

SDG: VR30 RUNID: IP111571 METHOD: ICP END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB4	1.00	11250			X			X		X					X		X	X	X		X											
PBS	VR30MB1	2.00	11291			X			X		X					X		X	X	X		X											
SA1-2C	VR30B	2.00	11333																														
SA1-3C	VR30C	2.00	11373			X			X		X					X		X	X	X		X											
SA1-3P-1(0 to 3	VR30D	2.00	11414																														
SA1-1CL	VR30A-L	10.00	11454			X			X		X					X		X	X	X		X											
SA1-1C	VR30A	2.00	11494			X			X		X					X		X	X	X		X											
SA1-1CD	VR30ADUP	2.00	11534			X			X		X					X		X	X	X		X											
SA1-1CS	VR30ASPK	2.00	11575			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	2.00	12011																														
LCSS	VR30MB1SPK	2.00	12043			X			X		X					X		X	X	X		X											
CCV	CCV5	1.00	12083			X			X		X					X		X	X	X		X											
CCB	CCB5	1.00	12124			X			X		X					X		X	X	X		X											
PBS	VR30MB2	2.00	12522			X					X					X		X	X			X											
SA1-3P-2(3 to 6	VR30E	2.00	12564																														
SA1-3P-3(6 to 12	VR30F	2.00	13004																														
SA1-3P-4(12 to 24	VR30G	2.00	13044																														
SA1-4C	VR30H	2.00	13084																														
SA1-5C	VR30I	2.00	13124			X			X		X					X		X	X	X		X											
SA1-6C	VR30J	2.00	13163			X			X		X					X		X	X	X		X											
SA1-7C	VR30K	2.00	13203			X			X		X					X		X	X	X		X											
SA1-8C	VR30L	2.00	13242			X			X		X					X		X	X	X		X											
LCSS	VR30MB2SPK	2.00	13283			X					X					X		X	X			X											
CCV	CCV6	1.00	13323			X			X		X					X		X	X	X		X											
CCB	CCB6	1.00	13365			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	13411			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	13452			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	13494			X			X		X					X		X	X	X		X											
CCV	CCV7	1.00	13534			X			X		X					X		X	X	X		X											
CCB	CCB7	1.00	13584			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/16/2012

SDG: VR30 | RUNID: IP111671 | METHOD: ICP | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08401			X			X		X					X		X	X	X		X											
S2	S2	1.00	08443						X											X													
S3	S3	1.00	08473																														
S4	S4	1.00	08501																														
S5	S5	1.00	08522			X					X					X		X	X			X											
S2	S2	1.00	09033						X											X													
ICV	ICV	1.00	09052			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09091			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09132			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09174			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09220			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09265			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09314			X			X		X					X		X	X	X		X											
SA1-2C	VR30B	5.00	09360			X			X		X					X		X	X	X		X											
SA1-3P-1(0 to 3	VR30D	5.00	09400			X			X		X					X		X	X	X		X											
SA1-3P-2(3 to 6	VR30E	5.00	09440			X			X		X					X		X	X	X		X											
SA1-3P-3(6 to 12	VR30F	5.00	09480			X			X		X					X		X	X	X		X											
SA1-3P-4(12 to 24	VR30G	5.00	09520			X			X		X					X		X	X	X		X											
SA1-4C	VR30H	5.00	09560			X			X		X					X		X	X	X		X											
CCV	CCV2	1.00	10000			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10050			X			X		X					X		X	X	X		X											
ZZZZZZ	VR32A-L	5.00	10091																														
ZZZZZZ	VR32A	5.00	10131																														
ZZZZZZ	VR32ADUP	5.00	10171																														
ZZZZZZ	VR32ASPK	5.00	10212																														
ZZZZZZ	ZZZZZZ	5.00	10250																														
ZZZZZZ	VR32L	5.00	10280																														
CCV	CCV3	1.00	10321			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	10361			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	10403			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	10445			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	10490			X			X		X					X		X	X	X		X											
CCV	CCV4	1.00	10525			X			X		X					X		X	X	X		X											
CCB	CCB4	1.00	10575			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR30 | RUNID: MS111511 | METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11590		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S1	S1	1.00	12030		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S2	S2	1.00	12070		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S3	S3	1.00	12110		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S4	S4	1.00	12160		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S5	S5	1.00	12220																														
ZZZZZZ	Rinse sampl	1.00	12290																														
ZZZZZZ	ZZZZZZ	1.00	12370																														
ICV	MICV	1.00	12450		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICB	ICB	1.00	12540		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV1	1.00	12580		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB1	1.00	13050		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CRI	MCRI	1.00	13090		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICSA	ICSAI	1.00	13130		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICSAB	ICSABI	1.00	13190		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	LR200	1.00	13260																														
ZZZZZZ	LR300	1.00	13330																														
ZZZZZZ	B1	1.00	13400																														
ZZZZZZ	B2	1.00	13460																														
ZZZZZZ	B3	1.00	13520																														
CCV	MCCV2	1.00	13560		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB2	1.00	14030		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31MB1	20.00	14070																														
ZZZZZZ	VR31MB1SPK	20.00	14110																														
ZZZZZZ	VR31A-L	100.00	14160																														
ZZZZZZ	VR31A	20.00	14200																														
ZZZZZZ	VR31ADUP	20.00	14240																														
ZZZZZZ	VR31ASPK	20.00	14280																														
ZZZZZZ	VR31APOST	20.00	14320																														
ZZZZZZ	VR31C	20.00	14360																														
ZZZZZZ	VR31D	20.00	14410																														
ZZZZZZ	VR31E	20.00	14450																														
CCV	MCCV3	1.00	14500		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB3	1.00	14560		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31J	20.00	15150																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR30

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111511 METHOD: PMS

START DATE: 11/15/2012

END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR31F	20.00	15190																														
ZZZZZZ	VR31H	20.00	15240																														
ZZZZZZ	VR31K	100.00	15280																														
ZZZZZZ	VR31K	20.00	15320																														
ZZZZZZ	VR31L	20.00	15360																														
ZZZZZZ	VR31I	20.00	15420																														
ZZZZZZ	VR31G	20.00	15460																														
ZZZZZZ	VR31B	400.00	15500																														
ZZZZZZ	VR31B	20.00	15540																														
CCV	MCCV4	1.00	15580		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB4	1.00	16050		X		X			X		X	X	X	X								X	X	X	X				X		X	X
PBS	VR30MB1	20.00	16120		X		X			X		X	X	X	X								X	X	X	X				X		X	X
LCSS	VR30MB1SPK	20.00	16160		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-1CL	VR30A-L	100.00	16210		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-1C	VR30A	20.00	16250		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-1CD	VR30ADUP	20.00	16290		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-1CS	VR30ASPK	20.00	16330		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-1CA	VR30APOST	20.00	16370																						X								
SA1-2C	VR30B	20.00	16410		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-3C	VR30C	20.00	16460		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-3P-1(0 to 3	VR30D	20.00	16500		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV5	1.00	16550		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB5	1.00	17020		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32MB1	20.00	17070																														
ZZZZZZ	VR32MB1SPK	20.00	17110																														
SA1-3P-2(3 to 6	VR30E	20.00	17160		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-3P-3(6 to 12	VR30F	20.00	17200		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-3P-4(12 to 24	VR30G	20.00	17240		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-4C	VR30H	20.00	17280		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-5C	VR30I	20.00	17320		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-6C	VR30J	20.00	17360		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-7C	VR30K	20.00	17410		X		X					X	X	X	X								X	X	X	X				X		X	X
SA1-8C	VR30L	20.00	17450		X		X					X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV6	1.00	17500		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB6	1.00	17560		X		X			X		X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/16/2012

SDG: VR30 | RUNID: MS111611 | METHOD: PMS | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	14450							X																							
S1	S1	1.00	14490							X																							
S2	S2	1.00	14540							X																							
S3	S3	1.00	14580							X																							
S4	S4	1.00	15030							X																							
S5	S5	1.00	15090																														
ZZZZZZ	Rinse sampl	1.00	15160																														
ICV	MICV	1.00	15220							X																							
ICB	ICB	1.00	15290							X																							
CCV	MCCV1	1.00	15330							X																							
CCB	CCB1	1.00	15400							X																							
CRI	MCRI	1.00	15440							X																							
ZZZZZZ	ZZZZZZ	1.00	15480																														
ICSAB	ICSABI	1.00	15550							X																							
ZZZZZZ	LR200	1.00	16020																														
ZZZZZZ	LR300	1.00	16090																														
ZZZZZZ	B1	1.00	16150																														
ZZZZZZ	B2	1.00	16210																														
ICSA	ICSAI	1.00	16270							X																							
ZZZZZZ	B3	1.00	16320																														
CCV	MCCV2	1.00	16370							X																							
CCB	CCB2	1.00	16440							X																							
ZZZZZZ	VR32MB1	20.00	16480																														
ZZZZZZ	VR32MB1SPK	20.00	16520																														
SA1-3P-2(3 to 6	VR30E	20.00	16560							X																							
SA1-3P-3(6 to 12	VR30F	20.00	17010							X																							
SA1-3P-4(12 to 24	VR30G	20.00	17050							X																							
SA1-4C	VR30H	20.00	17090							X																							
SA1-5C	VR30I	20.00	17130							X																							
SA1-6C	VR30J	20.00	17170							X																							
SA1-7C	VR30K	20.00	17220							X																							
SA1-8C	VR30L	20.00	17260							X																							
CCV	MCCV3	1.00	17310							X																							
CCB	CCB3	1.00	17370							X																							

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR30 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	06462														X																
S0.1	S0.1	1.00	06475														X																
S0.5	S0.5	1.00	06493														X																
S1	S1	1.00	06511														X																
S2	S2	1.00	06524														X																
S5	S5	1.00	06542														X																
S10	S10	1.00	06560														X																
ICV	AICV	1.00	07050														X																
ICB	ICB	1.00	07063														X																
CCV	ACCV1	1.00	07081														X																
CCB	CCB1	1.00	07095														X																
CRA	CRA	1.00	07113														X																
ZZZZZZ	VS18MB1	1.00	07130																														
ZZZZZZ	VS18MB1SPK	1.00	07144																														
ZZZZZZ	VS18A	1.00	07161																														
ZZZZZZ	VS18ADUP	1.00	07175																														
ZZZZZZ	VS18ASPK	1.00	07193																														
ZZZZZZ	VS18B	1.00	07210																														
ZZZZZZ	VS18C	1.00	07224																														
ZZZZZZ	VS18D	1.00	07242																														
ZZZZZZ	VS18E	1.00	07260																														
CCV	ACCV2	1.00	07274														X																
CCB	CCB2	1.00	07292														X																
ZZZZZZ	VS18F	1.00	07310																														
ZZZZZZ	VS18G	1.00	07323																														
ZZZZZZ	VS18H	1.00	07341																														
ZZZZZZ	VS18I	1.00	07354																														
ZZZZZZ	VS18J	1.00	07372																														
ZZZZZZ	VS18K	1.00	07385																														
ZZZZZZ	VS18L	1.00	07403																														
ZZZZZZ	VR37MB1	1.00	07421																														
ZZZZZZ	VR37MB1SPK	1.00	07434																														
ZZZZZZ	VR37A	1.00	07452																														
CCV	ACCV3	1.00	07470														X																
CCV	ACCV4	1.00	07584														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR30 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	08002														X																
ZZZZZZ	VS18F	1.00	08020																														
ZZZZZZ	VS18G	1.00	08033																														
ZZZZZZ	VS18H	1.00	08051																														
ZZZZZZ	VS18I	1.00	08064																														
ZZZZZZ	VS18J	1.00	08082																														
ZZZZZZ	VS18K	1.00	08095																														
ZZZZZZ	VS18L	1.00	08113																														
ZZZZZZ	VR37MB1	1.00	08131																														
ZZZZZZ	VR37MB1SPK	1.00	08144																														
ZZZZZZ	VR37A	1.00	08162																														
CCV	ACCV5	1.00	08180														X																
CCB	CCB4	1.00	08194														X																
ZZZZZZ	VR37ADUP	1.00	08212																														
ZZZZZZ	VR37ASPK	1.00	08230																														
ZZZZZZ	VR37B	1.00	08243																														
ZZZZZZ	VR37C	1.00	08261																														
ZZZZZZ	VR37D	1.00	08274																														
ZZZZZZ	VR37E	1.00	08292																														
ZZZZZZ	VR37F	1.00	08310																														
ZZZZZZ	VR37G	1.00	08323																														
ZZZZZZ	VR37H	1.00	08341																														
ZZZZZZ	VR37I	1.00	08355																														
CCV	ACCV6	1.00	08373														X																
CCB	CCB5	1.00	08391														X																
ZZZZZZ	VR37J	1.00	08404																														
ZZZZZZ	VR37K	1.00	08422																														
ZZZZZZ	VR37L	1.00	08440																														
ZZZZZZ	VR37M	1.00	08454																														
ZZZZZZ	VR37N	1.00	08472																														
ZZZZZZ	VR37O	1.00	08485																														
ZZZZZZ	VR58MB1	1.00	08503																														
ZZZZZZ	VR58MB1SPK	1.00	08520																														
ZZZZZZ	VR58A	1.00	08534																														
ZZZZZZ	VR58ADUP	1.00	08552																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR30 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	08565														X																
CCB	CCB6	1.00	08584														X																
ZZZZZZ	VR58ASPK	1.00	09001																														
ZZZZZZ	VR58B	1.00	09015																														
ZZZZZZ	VR58C	1.00	09033																														
ZZZZZZ	VR58D	1.00	09051																														
ZZZZZZ	VR58E	1.00	09065																														
ZZZZZZ	VR58F	1.00	09082																														
ZZZZZZ	VR58G	1.00	09100																														
ZZZZZZ	VR58H	1.00	09114																														
ZZZZZZ	VR58I	1.00	09131																														
ZZZZZZ	VR58J	1.00	09145																														
CCV	ACCV8	1.00	09163														X																
CCB	CCB7	1.00	09181														X																
ZZZZZZ	VR82A	1.00	09195																														
ZZZZZZ	VR82B	1.00	09213																														
ZZZZZZ	VR82C	1.00	09230																														
ZZZZZZ	VR82D	1.00	09244																														
ZZZZZZ	VR82E	1.00	09262																														
ZZZZZZ	VR82F	1.00	09280																														
ZZZZZZ	VR82G	1.00	09294																														
ZZZZZZ	VR82H	1.00	09311																														
ZZZZZZ	VR82I	1.00	09325																														
CCV	ACCV9	1.00	09343														X																
CCB	CCB8	1.00	09361														X																
PBW	VR30MB1	1.00	09382														X																
LCSW	VR30MB1SPK	1.00	09395														X																
SA1-1C	VR30A	1.00	09413														X																
SA1-1CD	VR30ADUP	1.00	09430														X																
SA1-1CS	VR30ASPK	1.00	09444														X																
SA1-2C	VR30B	1.00	09461														X																
SA1-3C	VR30C	1.00	09475														X																
SA1-3P-1(0 to 3	VR30D	1.00	09492														X																
SA1-3P-2(3 to 6	VR30E	1.00	09510														X																
SA1-3P-3(6 to 12	VR30F	1.00	09524														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR30 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV10	1.00	09542														X																
CCB	CCB9	1.00	09560														X																
SA1-3P-4(12 to 24	VR30G	1.00	09574														X																
SA1-4C	VR30H	1.00	09592														X																
SA1-5C	VR30I	1.00	10005														X																
SA1-6C	VR30J	1.00	10023														X																
SA1-7C	VR30K	1.00	10040														X																
SA1-8C	VR30L	1.00	10054														X																
ZZZZZZ	VR36MB1	1.00	10072																														
ZZZZZZ	VR36MB1SPK	1.00	10085																														
ZZZZZZ	VR36A	1.00	10103																														
ZZZZZZ	VR36ADUP	1.00	10121																														
CCV	ACCV11	1.00	10134														X																
CCB	CCB10	1.00	10152														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: VR30

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-1C
ARI ID: 12-22165 VR30A

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.83
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	87.60
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.200	9.54

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-2C
ARI ID: 12-22166 VR30B

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.91
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.50
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.198	5.51

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-3C
ARI ID: 12-22167 VR30C

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.90
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.70
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.198	5.85

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-3P-1(0 to 3" depth)
ARI ID: 12-22168 VR30D

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.06
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	92.60
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	3.93

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-3P-2(3 to 6" depth)
ARI ID: 12-22169 VR30E

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.06
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	96.20
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	2.52

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-3P-3(6 to 12" depth)
ARI ID: 12-22170 VR30F

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.10
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.40
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	2.41

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-3P-4(12 to 24" depth)
ARI ID: 12-22171 VR30G

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.24
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.90
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	1.50

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-4C
ARI ID: 12-22172 VR30H

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.84
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.50
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	2.97

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-5C
ARI ID: 12-22173 VR30I

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.87
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	93.20
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.192	8.47

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-6C
ARI ID: 12-22174 VR30J

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.56
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	93.00
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	4.75

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-7C
ARI ID: 12-22175 VR30K

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.90
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.90
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	4.96

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-8C
ARI ID: 12-22176 VR30L

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.68
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.90
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	7.92

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

MS/MSD RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VR30A Client ID: SA1-1C						
Total Organic Carbon	11/19/12	Percent	9.54	23.4	14.9	92.8%

REPLICATE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR30A Client ID: SA1-1C					
pH	11/13/12	std units	5.83	5.86	0.03
Total Solids	11/12/12	Percent	87.60	87.10 86.70	0.5%
Total Organic Carbon	11/19/12	Percent	9.54	8.18 7.98	9.9%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SW9045	ICVL	11/13/12	std units	7.03	7.00	0.03
Total Organic Carbon Plumb,1981	ICVL	11/19/12	Percent	0.100	0.100	100.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/12/12	Percent	< 0.01 U
Total Organic Carbon	11/19/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR30-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	11/19/12	Percent	2.87	2.99	96.0%

Total Solids

ARI Job ID: VR30

Solids Data Entry Report Checked by: NB Date: 11/14/12
Date: 11/14/12 Data Analyst: DM

Solids Determination performed on 11/13/12 by NB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
VR30	A	SA1-1C	1.000	10.771	9.456	86.54
VR30	B	SA1-2C	0.983	10.297	9.673	93.30
VR30	C	SA1-3C	0.990	10.548	10.050	94.79
VR30	D	SA1-3P-1(0 to 3	0.983	10.367	9.572	91.53
VR30	E	SA1-3P-2(3 to 6	0.991	10.554	10.101	95.26
VR30	F	SA1-3P-3(6 to 12	1.013	10.442	9.937	94.64
VR30	G	SA1-3P-4(12 to 24	1.004	10.269	9.821	95.16
VR30	H	SA1-4C	0.993	10.460	9.868	93.75
VR30	I	SA1-5C	1.008	10.619	9.871	92.22
VR30	J	SA1-6C	0.975	10.653	9.915	92.37
VR30	K	SA1-7C	0.975	10.327	9.766	94.00
VR30	L	SA1-8C	0.980	10.004	9.468	94.06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section METALS

Oven Identification: 014 **Balance ID:** BIL132369

Samples in Oven: Date: 11-13-12 Time: 1140 Temp: 107°C Analyst: NB

Removed from Oven: Date: 11-14-12 Time: 0732 Temp: 104°C Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
VR30 A	1.000	10.771	9.456	–	✓
" B	0.983	10.297	9.673	–	✓
" C	0.990	10.548	10.050	–	✓
" D	0.983	10.367	9.572	–	✓
" E	0.991	10.554	10.101	–	✓
" F	1.013	10.442	9.937	–	✓
" G	1.004	10.269	9.821	–	✓
" H	0.993	10.460	9.868	–	✓
" I	1.008	10.619	9.871	–	✓
" J	0.975	10.653	9.915	–	✓
" K	0.975	10.327	9.766	–	✓
" L	0.980	10.004	9.468	–	✓
		NB 11-13-12			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VR30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: NB

Date: 11-13-12

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID VR30 ASPK, MBSPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	2977-9		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200 ✓	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000 ✓	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200 ✓	200	
	K	1000 ✓	1000	
	Mg	1000 ✓	1000	
	Mn	50	50	
	Na	1000 ✓	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	SWN	SWN	SWN
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	2987-2	2956-7	2952-1
	1.0	1.0	1.0
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25 ✓		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25 ✓		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25 ✓		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25 ✓		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	2908-7
Hg MBSPK	SMM	CVA	1.0	0.10	2908-7
Sb	SWC	ICP	2000	0.10	2941-4
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM Matrix: SOIL
Analyst: NB Date: 11-13-12
Bath Temp: 91°C Start Time: 1253 End Time: 1323

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR30 A	1	—	0.726	50.0	11-13 1	YES	
" ADUP	1	—	0.726	↓	1	↓	
" ASPK	1	—	0.724		1		
" B	1	—	0.740		1		
" C	1	—	0.740		1		
" D	1	—	0.706		1		
" E	1	—	0.740		1		
" F	1	—	0.716		1		
" G	1	—	0.740		1		
" H	1	—	0.711		1		
" I	1	—	0.714		1		
" J	1	—	0.723		1		
" K	1	—	0.725		1		
" L	1	—	0.730		1		
" MBI	—	—	—	↓	1		
" MBISPK	—	—	—	50.0	1	↓	

NB 11-13 12

Chemical/Reagent ID:

HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 1205258

VR30 : 88888

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

All line-outs/corrections by: NB 11-13-12

Analyst: NB Date: 11-13-12 Time: 1222

Matrix: SOIL Block ID: #5 Block Temp: 92°C Thermometer: MP44

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR30 A	1	—	1.043	50.0	1.040	50.0	
" ADUF	1	—	1.043		1.039		
" ASPK	1	—	1.040		1.039		
" B	1	—	1.039		1.047		
" C	1	—	1.070		1.078		
" D	1	—	1.039		1.091		
" E	1	—	1.059		1.093		
" F	1	—	1.047		1.073		
" G	1	—	~~1.081~~		1.020		see green sheet
" H	1	—	1.021		1.067		
" I	1	—	1.004		1.061		
" J	1	—	~~1.043~~		1.058		see green sheet
" K	1	—	~~1.081~~		1.015		
" L	1	—	~~1.005~~		1.042		
" MBI	—	—	—		—		
" MBISPK	—	—	—	50.0	—	50.0	

NB 11-13-12

Chemical/Reagent ID:

HNO_3: MP2390/I7833 HCl: I7676 H_2O_2: I7845 Tube Lot #: 120743

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: NB **Final Volume** 50.0 **Sample ID** VBLK MBSPK

Date: 11-14-12 **Final Volume (Hg):** _____

Prepcode:		SWLC		
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No..		2977-9		
Vol Added (mL):		1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: NB Date: 11-14-12 Time: 1255

Matrix: SOIL Block ID: SWC: #5 / SWN: #4 Block Temp: SWC: 90°C / SWN: 90°C Thermometer: SWC: MP8 / SWN: MP44

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR32A	1	—	1.089	50.0	1.035	50.0	
" ADUP	1	—	1.093		1.033		
" ASPK	1	—	1.090		1.033		
" B	1	—	1.098		1.074		
" C	1	—	1.058		1.082		
" D	1	—	1.051		1.073		
" E	1	—	1.042		1.074		
" F	1	—	1.048		1.044		
" G	1	—	1.068		1.082		
" H	1	—	1.011		1.004		
" I	1	—	1.028		1.007		
" J	1	—	1.037		1.054		
" K	1	—	1.054		1.039		
" L	1	—	1.061		1.076		
" MB1	—	—	—		—		
" MB1SPK	—	—	—		—	50.0	
VR30G	1	—	1.079				
" J	1	—	1.085				
" K	1	—	1.023				
" L	1	—	1.081				
" MB2	—	—	—		*		
" MB2SPK	—	—	—	50.0	*		

NB 11-14-12

NB 11-14-12

NB 11-14-12 *

Chemical/Reagent ID:

HNO_3: MP2390/I7833 HCl: I7676 H_2O_2: I7845 Tube Lot #: 1207143

Analytical Resources, Incorporated
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Metals Laboratory Analyst Notes

ARI Job No.: VR30 Client ID: _____

Parameter: _____ Client Project: _____

List problems, concerns, corrective actions and any other pertinent information
Samples G, J, K, & L (SWC prep only) were mistakenly diluted to 50.0mL prior to addition of HCl. These four samples were discarded, the remaining samples were prepped to completion normally.

Analyst Initials:	NB	Date:	11-13-12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: VR30

Client ID: Hart Crowser

Parameter: ICP

Client Project: Upper Columbia

List problems, concerns, corrective actions and any other pertinent information
CCB5 Mn (0.0014 mg/L) > RL, bracketed samples
>10x contamination level or <RL.

Analyst Initials:	RBA	Date:	11/19/12

VR30 · 00099

Analytical Resources, Incorporated
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Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	VR30
Unacceptable Blank:	☐	Date of Event:	11.15.12
Unacceptable Duplicate:	☐	Client ID:	Heat Crowser
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

A: 0 ppb Sb
ASPK: 1.604 ppb Sb %R = 64

post-Spike ok

Samples Affected:

Corrective Action Taken:

Send

11/19/12

Analyst Initials: MJT **Supervisor:**

Date: 11.16.12 **Date:**

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VR30

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-15-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Sl. noisy
		3			-5
		4			-6
		5			-7
		ICV			2988-6
		ICB			
		CAI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VS40 MB1	SWC	2	
		B		5	High Ca ⇒ extra dil's
		C			
		D			
		E			
	✓	F			(Ca>LR)
		ADUP			✓
		A			
		ASPK			✓ Pb-C.A. ~~STL~~ BA 11/14/12
		MBISPK		2	✓
		CCV2			
		CCB2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-15-12 Analyst: BA

LR Date: — Page: 2 of 5

All corrections made by analyst unless otherwise noted. BA 11/16/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VS40 G	SWC	5	
	✓	H			Ca > LR
	✓	I			
	✓	J			
		F		10	
		CCV3			
		CCB3			
		VS40 H	SWC	10	
		I			
		J			
		CCV4			
		CCB4			
		VB30 MB1	SWC	2	
	✓	B			Fe > LR
		C			
	✓	D			Al > LR
		A-L			
		A			
		ADUP		✓	
		ASPK		✓	Al, Ca, Fe, Mg STL
		~~ZZZZZZ~~ APOST		✓	Al, Ca, Fe, Mg STL
		MB1SPK		✓	
		CCV5			
		CCB5			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-15-12 Analyst: BA

LR Date: — Page: 3 of 5

All corrections made by analyst unless otherwise noted. BA 11/16/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR30 MB2	SWC	2	
	✓	E			Al, Fe > LR
	✓	F			
	✓	G			
	✓	H			Al > LR
		I			
		J			
		K			
		L			
		MB2SPK			✓
		CCV6			
		CCB6			
		CRI			
		ICSA			
		ICSAB			
		CCV7			
		CCB7			End VR30
		CCV8			
		CCB8			
		VR32 MB1	SWC BA	2	11/16/12
		B			
		C			
		D			
	✓	~~ZZZZZZ A-E~~		10	

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-15-12

ICP-2	Analyst 11/16/12	Peer	Comment
Logbook:			
Analyst, Date, Method info	✓		
Sample ID's	✓		
Standard/QC solution ID's recorded	✓		
Prep codes	✓		
Dilution factors	✓		
Crossouts/Corrections/Deletions	✓		
Calibration:			
Blank & Standard intensities	✓		
Standard deviations	✓		
Curve fit	✓		
Calibration Verification:			
ICV/CCV	✓		
ICB/CCB	✓		See log - VR30, VR32
Samples:			
RSD's & SD's	✓		
Internal Standards	✓		
Carry-over	✓		See log
Method QC:			
CRI/CRA	✓		
ICSA/ICSAB	✓		
Post Spikes/Serial Dilutions	✓		See log
Analytic Spikes	—		
Matrix QC:			
SRM/LCS	✓		
Matrix Spikes	✓		See log
Matrix Duplicates	✓		
Method Blanks	✓		See log VR46
Data Distribution:			
Requested elements/isotope identified	✓		
Correct samples identified for distribution	✓		
Raw data match distributed data	✓		
Data filename correct	✓		
Necessary Analysts Notes and CAF's	✓		AN-VR46, VR30, VR32. CA-V540

VR32:00005

Analysis Begun

Start Time: 11/15/2012 8:44:09 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/15/2012 8:44:10 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2507773.8	3977.55	0.16%	100.0	%
ScR 361.383	325349.1	7706.85	2.37%	100.0	%
Ag 328.068†	-99.7	8.83	8.86%	[0.00]	mg/L
Al 308.215†	144.6	5.78	4.00%	[0.00]	mg/L
As 188.979†	-11.9	1.39	11.68%	[0.00]	mg/L
B 249.677†	39.5	2.52	6.38%	[0.00]	mg/L
Ba 233.527†	17.4	2.31	13.30%	[0.00]	mg/L
Be 313.042†	880.6	23.27	2.64%	[0.00]	mg/L
Ca 317.933†	171.6	19.29	11.24%	[0.00]	mg/L
Cd 228.802†	317.2	2.58	0.81%	[0.00]	mg/L
Co 228.616†	-86.4	1.10	1.28%	[0.00]	mg/L
Cr 267.716†	-85.1	8.25	9.69%	[0.00]	mg/L
Cu 324.752†	2385.2	26.38	1.11%	[0.00]	mg/L
Fe 273.955†	13.3	3.52	26.49%	[0.00]	mg/L
K 766.490†	517.4	3.77	0.73%	[0.00]	mg/L
Mg 279.077†	83.9	10.19	12.15%	[0.00]	mg/L
Mn 257.610†	142.9	1.87	1.31%	[0.00]	mg/L
Mo 202.031†	59.4	3.00	5.06%	[0.00]	mg/L
Na 589.592†	-283.1	9.79	3.46%	[0.00]	mg/L
Na 330.237†	-215.7	8.90	4.12%	[0.00]	mg/L
Ni 231.604†	-25.6	2.36	9.20%	[0.00]	mg/L
Pb 220.353†	63.0	2.56	4.07%	[0.00]	mg/L
Sb 206.836†	59.7	7.13	11.95%	[0.00]	mg/L
Se 196.026†	-49.4	3.18	6.43%	[0.00]	mg/L
Si 288.158†	64.2	14.28	22.27%	[0.00]	mg/L
Sn 189.927†	-2.6	2.62	101.36%	[0.00]	mg/L
Sr 421.552†	312.6	37.05	11.85%	[0.00]	mg/L
Ti 334.903†	-55.2	11.60	21.02%	[0.00]	mg/L
Tl 190.801†	-39.5	0.97	2.46%	[0.00]	mg/L
V 292.402†	145.8	6.26	4.30%	[0.00]	mg/L
Zn 206.200†	24.2	1.79	7.41%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 11/15/2012 8:48:24 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected			Calib	

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2597641.2	62481.84	2.41%	103.6	%
ScR 361.383	331338.9	9746.93	2.94%	101.8	%
Ba 233.527†	42438.2	1771.34	4.17%	[10]	mg/L
Cd 228.802†	298187.1	7514.95	2.52%	[10]	mg/L
Co 228.616†	325119.2	7965.67	2.45%	[10]	mg/L
Cr 267.716†	58337.9	2220.41	3.81%	[10]	mg/L
Cu 324.752†	2405838.9	59124.10	2.46%	[10]	mg/L
Mn 257.610†	338976.8	12342.25	3.64%	[10]	mg/L
V 292.402†	1220030.9	30922.81	2.53%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/15/2012 8:50:09 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2513550.2	8620.01	0.34%	100.2	%
ScR 361.383	323876.6	7853.05	2.42%	99.55	%
Ag 328.068†	166536.5	335.16	0.20%	[1.0]	mg/L
As 188.979†	17654.8	79.89	0.45%	[10]	mg/L
B 249.677†	73183.8	1382.25	1.89%	[10]	mg/L
Be 313.042†	3161166.1	86387.03	2.73%	[5.0]	mg/L
Na 589.592†	597803.8	15003.34	2.51%	[50]	mg/L
Ni 231.604†	38364.5	675.86	1.76%	[10]	mg/L
Pb 220.353†	76322.6	186.34	0.24%	[10]	mg/L
Se 196.026†	13924.1	61.32	0.44%	[10]	mg/L
Sr 421.552†	4386237.1	104992.89	2.39%	[5]	mg/L
Tl 190.801†	24018.1	66.26	0.28%	[10]	mg/L
Zn 206.200†	37848.8	625.34	1.65%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/15/2012 8:52:41 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2513078.8	18156.17	0.72%	100.2	%
ScR 361.383	328604.2	5697.20	1.73%	101.0	%
Mo 202.031†	189753.7	1267.32	0.67%	[10]	mg/L
Sb 206.836†	30950.9	147.60	0.48%	[10]	mg/L
Si 288.158†	20251.7	561.98	2.77%	[10]	mg/L
Sn 189.927†	36708.5	236.55	0.64%	[10]	mg/L
Ti 334.903†	194811.0	4695.61	2.41%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/15/2012 8:54:54 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2386623.9	6233.38	0.26%	95.17	%
ScR 361.383	325588.4	2852.64	0.88%	100.1	%
Al 308.215†	50666.2	806.02	1.59%	[30]	mg/L
Ca 317.933†	399607.2	8032.07	2.01%	[30]	mg/L
Fe 273.955†	121934.4	2636.67	2.16%	[100]	mg/L
K 766.490†	187111.1	3352.43	1.79%	[100]	mg/L
Mg 279.077†	41879.8	737.32	1.76%	[30]	mg/L
Na 330.237†	2723.2	50.21	1.84%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	166500	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1689	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1765	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7318	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4244	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	632200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13320	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	29820	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32510	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	5834	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	240600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1219	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1871	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1396	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	33900	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18980	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11960	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	27.23	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3836	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7632	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3095	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1392	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2025	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3671	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	877200	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	19480	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2402	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	122000	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3785	0.00000	1.000000	

==========

Analysis Begun

Start Time: 11/15/2012 8:58:48 AM **Plasma On Time: 11/15/2012 7:19:27 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 11/15/2012 8:58:49 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2526046.3	100.7	%	0.72				0.71%
ScR 361.383	320654.4	98.56	%	2.706				2.75%
Ag 328.068†	165044.9	0.9913	mg/L	0.01030	0.9913	mg/L	0.01030	1.04%
Al 308.215†	3493.0	2.034	mg/L	0.0541	2.034	mg/L	0.0541	2.66%
As 188.979†	3432.0	1.969	mg/L	0.0214	1.969	mg/L	0.0214	1.09%
B 249.677†	7177.0	0.9798	mg/L	0.02664	0.9798	mg/L	0.02664	2.72%
Ba 233.527†	4430.4	1.043	mg/L	0.0276	1.043	mg/L	0.0276	2.64%
Be 313.042†	596059.0	0.9426	mg/L	0.02577	0.9426	mg/L	0.02577	2.73%
Ca 317.933†	26016.9	1.953	mg/L	0.0583	1.953	mg/L	0.0583	2.99%
Cd 228.802†	31259.0	1.036	mg/L	0.0101	1.036	mg/L	0.0101	0.98%
Co 228.616†	32916.3	1.010	mg/L	0.0099	1.010	mg/L	0.0099	0.98%
Cr 267.716†	6061.4	1.038	mg/L	0.0255	1.038	mg/L	0.0255	2.45%
Cu 324.752†	250143.9	1.039	mg/L	0.0103	1.039	mg/L	0.0103	0.99%
Fe 273.955†	2529.5	2.067	mg/L	0.0560	2.067	mg/L	0.0560	2.71%
K 766.490†	37241.2	19.90	mg/L	0.671	19.90	mg/L	0.671	3.37%
Mg 279.077†	2843.2	2.044	mg/L	0.0529	2.044	mg/L	0.0529	2.59%
Mn 257.610†	33685.9	0.9941	mg/L	0.02705	0.9941	mg/L	0.02705	2.72%
Mo 202.031†	18640.6	0.9823	mg/L	0.00841	0.9823	mg/L	0.00841	0.86%
Na 589.592†	590412.2	49.38	mg/L	1.355	49.38	mg/L	1.355	2.74%
Na 330.237†	1431.9	52.48	mg/L	1.148	52.48	mg/L	1.148	2.19%
Ni 231.604†	3764.5	0.9815	mg/L	0.02506	0.9815	mg/L	0.02506	2.55%
Pb 220.353†	14374.9	1.884	mg/L	0.0151	1.884	mg/L	0.0151	0.80%
Sb 206.836†	6493.3	2.097	mg/L	0.0252	2.097	mg/L	0.0252	1.20%
Se 196.026†	2688.0	1.929	mg/L	0.0217	1.929	mg/L	0.0217	1.13%
Si 288.158†	4282.9	2.114	mg/L	0.0657	2.114	mg/L	0.0657	3.11%
Sn 189.927†	3700.3	1.009	mg/L	0.0082	1.009	mg/L	0.0082	0.81%
Sr 421.552†	848877.5	0.9677	mg/L	0.02758	0.9677	mg/L	0.02758	2.85%
Ti 334.903†	19993.1	1.025	mg/L	0.0293	1.025	mg/L	0.0293	2.86%
Tl 190.801†	4663.6	1.933	mg/L	0.0149	1.933	mg/L	0.0149	0.77%
V 292.402†	125233.2	1.031	mg/L	0.0103	1.031	mg/L	0.0103	1.00%
Zn 206.200†	3825.3	1.010	mg/L	0.0269	1.010	mg/L	0.0269	2.66%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/15/2012 9:02:53 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2556793.1	102.0	%	0.43				0.42%
ScR 361.383	325532.0	100.1	%	0.53				0.53%
Ag 328.068†	-17.8	-0.00011	mg/L	0.000133	-0.00011	mg/L	0.000133	124.81%
Al 308.215†	3.9	0.00227	mg/L	0.003504	0.00227	mg/L	0.003504	154.23%
As 188.979†	-0.3	-0.00016	mg/L	0.001636	-0.00016	mg/L	0.001636	999.24%
B 249.677†	38.2	0.00523	mg/L	0.001199	0.00523	mg/L	0.001199	22.94%
Ba 233.527†	-0.8	-0.00019	mg/L	0.001055	-0.00019	mg/L	0.001055	553.69%
Be 313.042†	221.6	0.00035	mg/L	0.000029	0.00035	mg/L	0.000029	8.22%
Ca 317.933†	-1.2	-0.00009	mg/L	0.000173	-0.00009	mg/L	0.000173	198.74%
Cd 228.802†	4.8	0.00016	mg/L	0.000085	0.00016	mg/L	0.000085	52.49%
Co 228.616†	7.5	0.00023	mg/L	0.000087	0.00023	mg/L	0.000087	38.29%
Cr 267.716†	-0.0	-0.00001	mg/L	0.001315	-0.00001	mg/L	0.001315	>999.9%
Cu 324.752†	84.7	0.00035	mg/L	0.000096	0.00035	mg/L	0.000096	27.35%
Fe 273.955†	7.6	0.00622	mg/L	0.001890	0.00622	mg/L	0.001890	30.41%
K 766.490†	17.7	0.00947	mg/L	0.015702	0.00947	mg/L	0.015702	165.76%
Mg 279.077†	5.6	0.00404	mg/L	0.005310	0.00404	mg/L	0.005310	131.37%
Mn 257.610†	10.3	0.00031	mg/L	0.000181	0.00031	mg/L	0.000181	59.29%
Mo 202.031†	33.9	0.00179	mg/L	0.000343	0.00179	mg/L	0.000343	19.20%
Na 589.592†	172.5	0.01443	mg/L	0.004650	0.01443	mg/L	0.004650	32.22%
Na 330.237†	-4.3	-0.1571	mg/L	0.17666	-0.1571	mg/L	0.17666	112.46%
Ni 231.604†	2.4	0.00064	mg/L	0.001090	0.00064	mg/L	0.001090	171.60%
Pb 220.353†	1.1	0.00014	mg/L	0.000587	0.00014	mg/L	0.000587	425.08%
Sb 206.836†	10.7	0.00346	mg/L	0.000454	0.00346	mg/L	0.000454	13.09%
Se 196.026†	3.3	0.00235	mg/L	0.004730	0.00235	mg/L	0.004730	201.15%
Si 288.158†	-9.9	-0.00488	mg/L	0.003778	-0.00488	mg/L	0.003778	77.49%
Sn 189.927†	4.5	0.00122	mg/L	0.000206	0.00122	mg/L	0.000206	16.93%
Sr 421.552†	310.6	0.00035	mg/L	0.000006	0.00035	mg/L	0.000006	1.77%
Ti 334.903†	22.6	0.00116	mg/L	0.000965	0.00116	mg/L	0.000965	83.19%
Tl 190.801†	1.7	0.00072	mg/L	0.001819	0.00072	mg/L	0.001819	253.52%
V 292.402†	29.6	0.00024	mg/L	0.000200	0.00024	mg/L	0.000200	82.37%
Zn 206.200†	1.8	0.00049	mg/L	0.000127	0.00049	mg/L	0.000127	25.99%

Sequence No.: 3
Sample ID: CRI
Dilution: 1.000000X

Autosampler Location: 301
Date Collected: 11/15/2012 9:07:09 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2527023.3	100.8	%	0.30				0.29%
ScR 361.383	328762.0	101.0	%	0.57				0.57%
Ag 328.068†	493.5	0.00296	mg/L	0.000273	0.00296	mg/L	0.000273	9.21%
Al 308.215†	89.7	0.05293	mg/L	0.002048	0.05293	mg/L	0.002048	3.87%
As 188.979†	86.8	0.04927	mg/L	0.002452	0.04927	mg/L	0.002452	4.98%
B 249.677†	159.2	0.02175	mg/L	0.000452	0.02175	mg/L	0.000452	2.08%
Ba 233.527†	13.6	0.00320	mg/L	0.000208	0.00320	mg/L	0.000208	6.48%
Be 313.042†	648.8	0.00103	mg/L	0.000027	0.00103	mg/L	0.000027	2.64%
Ca 317.933†	628.1	0.04715	mg/L	0.002393	0.04715	mg/L	0.002393	5.08%
Cd 228.802†	85.8	0.00256	mg/L	0.000274	0.00256	mg/L	0.000274	10.71%
Co 228.616†	135.3	0.00415	mg/L	0.000240	0.00415	mg/L	0.000240	5.78%
Cr 267.716†	34.0	0.00582	mg/L	0.001949	0.00582	mg/L	0.001949	33.51%
Cu 324.752†	632.9	0.00263	mg/L	0.000313	0.00263	mg/L	0.000313	11.91%
Fe 273.955†	65.7	0.05386	mg/L	0.003753	0.05386	mg/L	0.003753	6.97%
K 766.490†	881.5	0.4711	mg/L	0.02205	0.4711	mg/L	0.02205	4.68%
Mg 279.077†	71.3	0.05109	mg/L	0.008252	0.05109	mg/L	0.008252	16.15%
Mn 257.610†	38.8	0.00115	mg/L	0.000224	0.00115	mg/L	0.000224	19.52%
Mo 202.031†	110.5	0.00582	mg/L	0.000215	0.00582	mg/L	0.000215	3.69%
Na 589.592†	5606.5	0.4689	mg/L	0.00388	0.4689	mg/L	0.00388	0.83%
Na 330.237†	22.6	0.8293	mg/L	0.26336	0.8293	mg/L	0.26336	31.76%
Ni 231.604†	36.8	0.00959	mg/L	0.000659	0.00959	mg/L	0.000659	6.87%
Pb 220.353†	147.0	0.01928	mg/L	0.000328	0.01928	mg/L	0.000328	1.70%
Sb 206.836†	169.2	0.05471	mg/L	0.000281	0.05471	mg/L	0.000281	0.51%
Se 196.026†	67.1	0.04819	mg/L	0.001541	0.04819	mg/L	0.001541	3.20%
Si 288.158†	125.6	0.06199	mg/L	0.003804	0.06199	mg/L	0.003804	6.14%
Sn 189.927†	38.6	0.01055	mg/L	0.000669	0.01055	mg/L	0.000669	6.33%
Sr 421.552†	937.8	0.00107	mg/L	0.000018	0.00107	mg/L	0.000018	1.69%
Ti 334.903†	103.3	0.00529	mg/L	0.000471	0.00529	mg/L	0.000471	8.90%
Tl 190.801†	110.2	0.04586	mg/L	0.001291	0.04586	mg/L	0.001291	2.81%
V 292.402†	432.0	0.00356	mg/L	0.000366	0.00356	mg/L	0.000366	10.28%
Zn 206.200†	35.1	0.00928	mg/L	0.000744	0.00928	mg/L	0.000744	8.02%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/15/2012 9:11:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
A11	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2511077.6	100.1	%	0.24				0.24%
ScR 361.383	322019.5	98.98	%	0.313				0.32%
Ag 328.068†	-202.2	-0.00121	mg/L	0.000154	-0.00121	mg/L	0.000154	12.73%
Al 308.215†	334757.5	198.2	mg/L	1.68	198.2	mg/L	1.68	0.85%
As 188.979†	37.5	0.01566	mg/L	0.000355	0.01566	mg/L	0.000355	2.27%
B 249.677†	-2.1	-0.00029	mg/L	0.002457	-0.00029	mg/L	0.002457	841.76%
Ba 233.527†	131.4	-0.00065	mg/L	0.000639	-0.00065	mg/L	0.000639	98.06%
Be 313.042†	71.4	0.00011	mg/L	0.000011	0.00011	mg/L	0.000011	9.54%
Ca 317.933†	1323676.3	99.37	mg/L	1.402	99.37	mg/L	1.402	1.41%
Cd 228.802†	63.3	0.00014	mg/L	0.000252	0.00014	mg/L	0.000252	175.22%
Co 228.616†	84.3	0.00006	mg/L	0.000209	0.00006	mg/L	0.000209	328.91%
Cr 267.716†	9.3	-0.00065	mg/L	0.000439	-0.00065	mg/L	0.000439	67.56%
Cu 324.752†	-1900.4	-0.00023	mg/L	0.000159	-0.00023	mg/L	0.000159	68.56%
Fe 273.955†	235500.5	193.1	mg/L	2.82	193.1	mg/L	2.82	1.46%
K 766.490†	-3.3	-0.00176	mg/L	0.023799	-0.00176	mg/L	0.023799	>999.9%
Mg 279.077†	144234.3	103.2	mg/L	1.94	103.2	mg/L	1.94	1.88%
Mn 257.610†	15.6	0.00041	mg/L	0.000233	0.00041	mg/L	0.000233	56.53%
Mo 202.031†	41.2	0.00110	mg/L	0.000396	0.00110	mg/L	0.000396	36.02%
Na 589.592†	126.2	0.01055	mg/L	0.002332	0.01055	mg/L	0.002332	22.10%
Na 330.237†	-5.1	-0.1888	mg/L	0.17451	-0.1888	mg/L	0.17451	92.41%
Ni 231.604†	0.3	0.00009	mg/L	0.001674	0.00009	mg/L	0.001674	>999.9%
Pb 220.353†	-280.9	0.00269	mg/L	0.000242	0.00269	mg/L	0.000242	9.01%
Sb 206.836†	21.4	0.00674	mg/L	0.001096	0.00674	mg/L	0.001096	16.26%
Se 196.026†	21.8	0.01567	mg/L	0.002626	0.01567	mg/L	0.002626	16.76%
Si 288.158†	-29.1	-0.00186	mg/L	0.004206	-0.00186	mg/L	0.004206	225.67%
Sn 189.927†	-76.7	-0.00861	mg/L	0.000603	-0.00861	mg/L	0.000603	7.00%
Sr 421.552†	3424.3	0.00390	mg/L Conf.	0.000041	0.00390	mg/L	0.000041	1.05%
Ti 334.903†	141.4	0.00251	mg/L	0.000569	0.00251	mg/L	0.000569	22.63%
Tl 190.801†	-58.4	-0.00371	mg/L	0.001047	-0.00371	mg/L	0.001047	28.25%
V 292.402†	1361.9	0.00442	mg/L	0.000092	0.00442	mg/L	0.000092	2.09%
Zn 206.200†	17.1	0.00452	mg/L	0.000355	0.00452	mg/L	0.000355	7.85%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/15/2012 9:15:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2528705.3	100.8	%	0.68				0.67%
ScR 361.383	315820.9	97.07	%	1.540				1.59%
Ag 328.068†	161011.1	0.9671	mg/L	0.00141	0.9671	mg/L	0.00141	0.15%
Al 308.215†	337545.6	199.8	mg/L	2.76	199.8	mg/L	2.76	1.38%
As 188.979†	1724.2	0.9702	mg/L	0.00654	0.9702	mg/L	0.00654	0.67%
B 249.677†	-0.8	-0.00217	mg/L	0.000529	-0.00217	mg/L	0.000529	24.45%
Ba 233.527†	4562.3	1.043	mg/L	0.0144	1.043	mg/L	0.0144	1.38%
Be 313.042†	600467.0	0.9496	mg/L	0.01265	0.9496	mg/L	0.01265	1.33%
Ca 317.933†	1340770.7	100.7	mg/L	1.44	100.7	mg/L	1.44	1.43%
Cd 228.802†	30549.3	1.017	mg/L	0.0038	1.017	mg/L	0.0038	0.38%
Co 228.616†	32468.8	0.9959	mg/L	0.00634	0.9959	mg/L	0.00634	0.64%
Cr 267.716†	6049.7	1.035	mg/L	0.0134	1.035	mg/L	0.0134	1.29%
Cu 324.752†	245445.9	1.028	mg/L	0.0013	1.028	mg/L	0.0013	0.13%
Fe 273.955†	238238.8	195.4	mg/L	2.33	195.4	mg/L	2.33	1.19%
K 766.490†	-73.1	-0.03909	mg/L	0.005856	-0.03909	mg/L	0.005856	14.98%
Mg 279.077†	140087.6	100.2	mg/L	1.32	100.2	mg/L	1.32	1.32%
Mn 257.610†	33142.1	0.9779	mg/L	0.01224	0.9779	mg/L	0.01224	1.25%
Mo 202.031†	45.3	0.00124	mg/L	0.000058	0.00124	mg/L	0.000058	4.64%
Na 589.592†	316.9	0.02651	mg/L	0.001879	0.02651	mg/L	0.001879	7.09%
Na 330.237†	6.5	-0.07239	mg/L	0.118756	-0.07239	mg/L	0.118756	164.06%
Ni 231.604†	3658.1	0.9537	mg/L	0.01379	0.9537	mg/L	0.01379	1.45%
Pb 220.353†	6822.3	0.9343	mg/L	0.00771	0.9343	mg/L	0.00771	0.83%
Sb 206.836†	3098.1	0.9898	mg/L	0.00848	0.9898	mg/L	0.00848	0.86%
Se 196.026†	1333.9	0.9569	mg/L	0.00683	0.9569	mg/L	0.00683	0.71%
Si 288.158†	-33.0	-0.00045	mg/L	0.003204	-0.00045	mg/L	0.003204	707.87%
Sn 189.927†	-77.4	-0.00814	mg/L	0.000664	-0.00814	mg/L	0.000664	8.16%
Sr 421.552†	3392.4	0.00387	mg/L	0.000068	0.00387	mg/L	0.000068	1.75%
Ti 334.903†	144.0	0.00238	mg/L	0.000136	0.00238	mg/L	0.000136	5.70%
Tl 190.801†	2139.3	0.9023	mg/L	0.00577	0.9023	mg/L	0.00577	0.64%
V 292.402†	119844.4	0.9801	mg/L	0.00119	0.9801	mg/L	0.00119	0.12%
Zn 206.200†	3574.4	0.9444	mg/L	0.01280	0.9444	mg/L	0.01280	1.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/15/2012 9:20:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2555973.3	101.9	%	0.06				0.05%
ScR 361.383	324721.0	99.81	%	1.317				1.32%
Ag 328.068†	166240.7	0.9985	mg/L	0.00150	0.9985	mg/L	0.00150	0.15%
Al 308.215†	3532.6	2.057	mg/L	0.0287	2.057	mg/L	0.0287	1.40%
As 188.979†	3454.0	1.982	mg/L	0.0140	1.982	mg/L	0.0140	0.71%
B 249.677†	7158.0	0.9772	mg/L	0.01110	0.9772	mg/L	0.01110	1.14%
Ba 233.527†	4488.2	1.057	mg/L	0.0107	1.057	mg/L	0.0107	1.02%
Be 313.042†	602500.1	0.9528	mg/L	0.01590	0.9528	mg/L	0.01590	1.67%
Ca 317.933†	26642.0	2.000	mg/L	0.0313	2.000	mg/L	0.0313	1.57%
Cd 228.802†	31401.6	1.041	mg/L	0.0039	1.041	mg/L	0.0039	0.37%
Co 228.616†	33352.4	1.024	mg/L	0.0026	1.024	mg/L	0.0026	0.25%
Cr 267.716†	6106.5	1.046	mg/L	0.0081	1.046	mg/L	0.0081	0.77%
Cu 324.752†	243019.1	1.010	mg/L	0.0022	1.010	mg/L	0.0022	0.22%
Fe 273.955†	2564.2	2.096	mg/L	0.0253	2.096	mg/L	0.0253	1.21%
K 766.490†	37536.5	20.06	mg/L	0.266	20.06	mg/L	0.266	1.33%
Mg 279.077†	2895.7	2.081	mg/L	0.0118	2.081	mg/L	0.0118	0.57%
Mn 257.610†	33964.1	1.002	mg/L	0.0174	1.002	mg/L	0.0174	1.74%
Mo 202.031†	18765.2	0.9888	mg/L	0.00291	0.9888	mg/L	0.00291	0.29%
Na 589.592†	592702.3	49.57	mg/L	0.719	49.57	mg/L	0.719	1.45%
Na 330.237†	1426.0	52.26	mg/L	0.547	52.26	mg/L	0.547	1.05%
Ni 231.604†	3799.6	0.9907	mg/L	0.01028	0.9907	mg/L	0.01028	1.04%
Pb 220.353†	14526.1	1.904	mg/L	0.0070	1.904	mg/L	0.0070	0.37%
Sb 206.836†	6513.3	2.103	mg/L	0.0079	2.103	mg/L	0.0079	0.38%
Se 196.026†	2701.1	1.939	mg/L	0.0144	1.939	mg/L	0.0144	0.74%
Si 288.158†	4275.9	2.111	mg/L	0.0245	2.111	mg/L	0.0245	1.16%
Sn 189.927†	3693.6	1.008	mg/L	0.0076	1.008	mg/L	0.0076	0.75%
Sr 421.552†	851219.1	0.9703	mg/L	0.01489	0.9703	mg/L	0.01489	1.53%
Ti 334.903†	20141.7	1.033	mg/L	0.0158	1.033	mg/L	0.0158	1.53%
Tl 190.801†	4700.9	1.949	mg/L	0.0077	1.949	mg/L	0.0077	0.39%
V 292.402†	126563.4	1.042	mg/L	0.0013	1.042	mg/L	0.0013	0.13%
Zn 206.200†	3888.9	1.027	mg/L	0.0102	1.027	mg/L	0.0102	0.99%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/15/2012 9:25:41 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2548393.8	101.6	%	0.14				0.14%
ScR 361.383	329143.9	101.2	%	1.47				1.45%
Ag 328.068†	-52.2	-0.00031	mg/L	0.000211	-0.00031	mg/L	0.000211	67.23%
Al 308.215†	-2.7	-0.00160	mg/L	0.009622	-0.00160	mg/L	0.009622	601.76%
As 188.979†	2.0	0.00121	mg/L	0.000042	0.00121	mg/L	0.000042	3.47%
B 249.677†	18.3	0.00250	mg/L	0.000705	0.00250	mg/L	0.000705	28.24%
Ba 233.527†	2.0	0.00048	mg/L	0.000251	0.00048	mg/L	0.000251	52.49%
Be 313.042†	109.1	0.00017	mg/L	0.000037	0.00017	mg/L	0.000037	21.38%
Ca 317.933†	34.2	0.00257	mg/L	0.000453	0.00257	mg/L	0.000453	17.63%
Cd 228.802†	8.5	0.00028	mg/L	0.000052	0.00028	mg/L	0.000052	18.91%
Co 228.616†	10.6	0.00032	mg/L	0.000069	0.00032	mg/L	0.000069	21.42%
Cr 267.716†	1.3	0.00023	mg/L	0.001213	0.00023	mg/L	0.001213	531.93%
Cu 324.752†	74.1	0.00031	mg/L	0.000136	0.00031	mg/L	0.000136	44.16%
Fe 273.955†	9.8	0.00803	mg/L	0.002059	0.00803	mg/L	0.002059	25.62%
K 766.490†	18.6	0.00992	mg/L	0.010468	0.00992	mg/L	0.010468	105.53%
Mg 279.077†	7.4	0.00528	mg/L	0.002626	0.00528	mg/L	0.002626	49.69%
Mn 257.610†	1.8	0.00005	mg/L	0.000046	0.00005	mg/L	0.000046	86.42%
Mo 202.031†	19.9	0.00105	mg/L	0.000138	0.00105	mg/L	0.000138	13.18%
Na 589.592†	58.6	0.00490	mg/L	0.002046	0.00490	mg/L	0.002046	41.73%
Na 330.237†	1.7	0.06378	mg/L	0.199624	0.06378	mg/L	0.199624	313.01%
Ni 231.604†	0.6	0.00017	mg/L	0.001030	0.00017	mg/L	0.001030	602.39%
Pb 220.353†	-4.4	-0.00058	mg/L	0.000164	-0.00058	mg/L	0.000164	28.43%
Sb 206.836†	9.2	0.00296	mg/L	0.001942	0.00296	mg/L	0.001942	65.54%
Se 196.026†	1.4	0.00103	mg/L	0.001872	0.00103	mg/L	0.001872	181.72%
Si 288.158†	-0.2	-0.00009	mg/L	0.002231	-0.00009	mg/L	0.002231	>999.9%
Sn 189.927†	-0.3	-0.00007	mg/L	0.000777	-0.00007	mg/L	0.000777	>999.9%
Sr 421.552†	155.6	0.00018	mg/L	0.000020	0.00018	mg/L	0.000020	11.18%
Ti 334.903†	34.8	0.00178	mg/L	0.000824	0.00178	mg/L	0.000824	46.18%
Tl 190.801†	-2.0	-0.00083	mg/L	0.001808	-0.00083	mg/L	0.001808	218.97%
V 292.402†	16.8	0.00014	mg/L	0.000100	0.00014	mg/L	0.000100	72.30%
Zn 206.200†	-1.0	-0.00026	mg/L	0.000186	-0.00026	mg/L	0.000186	71.59%

Analysis Begun

Start Time: 11/15/2012 9:44:17 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VS40 MB1 SWC
Autosampler Location: 304
Date Collected: 11/15/2012 9:44:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS40 MB1 SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2607686.8	104.0	%	0.28				0.27%
ScR 361.383	329133.2	101.2	%	1.59				1.57%
Ag 328.068†	-28.5	-0.00017	mg/L	0.000096	-0.00034	mg/L	0.000193	56.31%
Al 308.215†	10.3	0.00611	mg/L	0.001620	0.01223	mg/L	0.003241	26.50%
As 188.979†	2.0	0.00118	mg/L	0.000340	0.00236	mg/L	0.000679	28.74%
B 249.677†	3.5	0.00047	mg/L	0.000325	0.00095	mg/L	0.000649	68.36%
Ba 233.527†	-0.2	-0.00006	mg/L	0.000577	-0.00011	mg/L	0.001155	>999.9%
Be 313.042†	12.5	0.00002	mg/L	0.000020	0.00004	mg/L	0.000040	100.09%
Ca 317.933†	151.3	0.01136	mg/L	0.000471	0.02272	mg/L	0.000942	4.15%
Cd 228.802†	-6.5	-0.00023	mg/L	0.000118	-0.00045	mg/L	0.000235	51.84%
Co 228.616†	5.8	0.00018	mg/L	0.000047	0.00035	mg/L	0.000094	26.59%
Cr 267.716†	5.7	0.00097	mg/L	0.000540	0.00194	mg/L	0.001080	55.76%
Cu 324.752†	103.8	0.00043	mg/L	0.000118	0.00086	mg/L	0.000236	27.36%
Fe 273.955†	4.6	0.00377	mg/L	0.001271	0.00754	mg/L	0.002541	33.68%
K 766.490†	-31.6	-0.01691	mg/L	0.011280	-0.03383	mg/L	0.022560	66.69%
Mg 279.077†	10.9	0.00783	mg/L	0.001982	0.01566	mg/L	0.003965	25.32%
Mn 257.610†	-3.1	-0.00009	mg/L	0.000112	-0.00018	mg/L	0.000224	121.29%
Mo 202.031†	-0.7	-0.00004	mg/L	0.000250	-0.00008	mg/L	0.000501	639.06%
Na 589.592†	29.1	0.00244	mg/L	0.001546	0.00488	mg/L	0.003091	63.41%
Na 330.237†	4.7	0.1729	mg/L	0.26321	0.3458	mg/L	0.52643	152.23%
Ni 231.604†	-4.5	-0.00118	mg/L	0.000578	-0.00236	mg/L	0.001156	48.96%
Pb 220.353†	-5.3	-0.00069	mg/L	0.001232	-0.00138	mg/L	0.002463	178.96%
Sb 206.836†	2.7	0.00087	mg/L	0.001295	0.00175	mg/L	0.002590	148.09%
Se 196.026†	2.1	0.00151	mg/L	0.004081	0.00301	mg/L	0.008161	270.77%
Si 288.158†	-1.2	-0.00057	mg/L	0.002285	-0.00114	mg/L	0.004570	399.97%
Sn 189.927†	0.3	0.00007	mg/L	0.000848	0.00015	mg/L	0.001695	>999.9%
Sr 421.552†	57.7	0.00007	mg/L	0.000034	0.00013	mg/L	0.000067	50.98%
Ti 334.903†	17.3	0.00089	mg/L	0.000660	0.00177	mg/L	0.001321	74.43%
Tl 190.801†	0.3	0.00014	mg/L	0.000907	0.00028	mg/L	0.001815	645.24%
V 292.402†	-12.2	-0.00010	mg/L	0.000080	-0.00019	mg/L	0.000159	82.92%
Zn 206.200†	7.3	0.00192	mg/L	0.000210	0.00384	mg/L	0.000420	10.93%

Sequence No.: 2
Sample ID: VS40 B SWC

Autosampler Location: 305
Date Collected: 11/15/2012 9:48:35 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 B SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2517776.3	100.4	%	0.54				0.54%
ScR 361.383	323689.1	99.49	%	0.494				0.50%
Ag 328.068†	-192.1	-0.00110	mg/L	0.000225	-0.00552	mg/L	0.001126	20.39%
Al 308.215†	139074.1	82.34	mg/L	1.178	411.7	mg/L	5.89	1.43%
As 188.979†	20.5	0.05369	mg/L	0.004248	0.2685	mg/L	0.02124	7.91%
B 249.677†	160.0	0.02176	mg/L	0.000714	0.1088	mg/L	0.00357	3.28%
Ba 233.527†	4384.5	1.020	mg/L	0.0184	5.099	mg/L	0.0918	1.80%
Be 313.042†	799.0	0.00120	mg/L	0.000013	0.00601	mg/L	0.000065	1.07%
Ca 317.933†	5470766.6	410.7	mg/L	7.24	2054	mg/L	36.19	1.76%
Cd 228.802†	69.1	0.00152	mg/L	0.000131	0.00762	mg/L	0.000655	8.60%
Co 228.616†	1736.5	0.04779	mg/L	0.000751	0.2390	mg/L	0.00375	1.57%
Cr 267.716†	706.5	0.1185	mg/L	0.00225	0.5925	mg/L	0.01124	1.90%
Cu 324.752†	130985.9	0.5474	mg/L	0.00900	2.737	mg/L	0.0450	1.64%
Fe 273.955†	99442.3	81.55	mg/L	1.048	407.8	mg/L	5.24	1.29%
K 766.490†	7668.5	4.098	mg/L	0.0342	20.49	mg/L	0.171	0.84%
Mg 279.077†	28201.6	20.16	mg/L	0.366	100.8	mg/L	1.83	1.81%
Mn 257.610†	77110.0	2.276	mg/L	0.0305	11.38	mg/L	0.152	1.34%
Mo 202.031†	213.6	0.00681	mg/L	0.000326	0.03405	mg/L	0.001631	4.79%
Na 589.592†	29290.5	2.450	mg/L	0.0309	12.25	mg/L	0.154	1.26%
Na 330.237†	69.6	2.764	mg/L	0.1746	13.82	mg/L	0.873	6.32%
Ni 231.604†	303.2	0.07907	mg/L	0.001020	0.3953	mg/L	0.00510	1.29%
Pb 220.353†	79284.0	10.40	mg/L	0.188	52.02	mg/L	0.939	1.81%
Sb 206.836†	126.8	0.04113	mg/L	0.000978	0.2056	mg/L	0.00489	2.38%
Se 196.026†	-11.9	-0.00867	mg/L	0.007767	-0.04335	mg/L	0.038833	89.58%
Si 288.158†	1194.3	0.5920	mg/L	0.01023	2.960	mg/L	0.0511	1.73%
Sn 189.927†	86.0	0.07490	mg/L	0.000413	0.3745	mg/L	0.00207	0.55%
Sr 421.552†	1225317.8	1.397	mg/L	0.0170	6.984	mg/L	0.0849	1.21%
Ti 334.903†	45002.5	2.290	mg/L	0.0334	11.45	mg/L	0.167	1.46%
Tl 190.801†	0.1	0.00783	mg/L	0.002153	0.03916	mg/L	0.010767	27.50%
V 292.402†	20708.6	0.1665	mg/L	0.00266	0.8323	mg/L	0.01331	1.60%
Zn 206.200†	3648.4	0.9645	mg/L	0.02148	4.822	mg/L	0.1074	2.23%

Sequence No.: 3
Sample ID: VS40 C SWC

Autosampler Location: 306
Date Collected: 11/15/2012 9:53:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 C SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2532051.1	101.0	%	0.49				0.49%
ScR 361.383	330251.5	101.5	%	0.22				0.22%
Ag 328.068†	-209.7	-0.00120	mg/L	0.000303	-0.00601	mg/L	0.001515	25.20%
Al 308.215†	136138.6	80.60	mg/L	0.159	403.0	mg/L	0.80	0.20%
As 188.979†	0.1	0.05707	mg/L	0.001144	0.2854	mg/L	0.00572	2.01%
B 249.677†	137.5	0.01869	mg/L	0.001013	0.09343	mg/L	0.005067	5.42%
Ba 233.527†	4052.7	0.9409	mg/L	0.00678	4.704	mg/L	0.0339	0.72%
Be 313.042†	652.5	0.00096	mg/L	0.000007	0.00480	mg/L	0.000037	0.78%
Ca 317.933†	4933212.7	370.4	mg/L	1.79	1852	mg/L	8.95	0.48%
Cd 228.802†	56.8	0.00115	mg/L	0.000097	0.00576	mg/L	0.000483	8.40%
Co 228.616†	1737.6	0.04692	mg/L	0.000417	0.2346	mg/L	0.00208	0.89%
Cr 267.716†	751.7	0.1266	mg/L	0.00101	0.6329	mg/L	0.00505	0.80%
Cu 324.752†	105301.6	0.4407	mg/L	0.00725	2.204	mg/L	0.0363	1.65%
Fe 273.955†	104728.8	85.89	mg/L	0.421	429.4	mg/L	2.10	0.49%
K 766.490†	10296.8	5.503	mg/L	0.0151	27.52	mg/L	0.076	0.27%
Mg 279.077†	32317.8	23.10	mg/L	0.083	115.5	mg/L	0.41	0.36%
Mn 257.610†	64903.0	1.914	mg/L	0.0082	9.571	mg/L	0.0412	0.43%
Mo 202.031†	198.4	0.00645	mg/L	0.000518	0.03223	mg/L	0.002592	8.04%
Na 589.592†	27081.3	2.265	mg/L	0.0057	11.33	mg/L	0.028	0.25%
Na 330.237†	67.9	2.838	mg/L	0.1391	14.19	mg/L	0.696	4.90%
Ni 231.604†	333.4	0.08691	mg/L	0.000880	0.4346	mg/L	0.00440	1.01%
Pb 220.353†	15569.4	2.055	mg/L	0.0281	10.28	mg/L	0.141	1.37%
Sb 206.836†	28.1	0.00921	mg/L	0.000780	0.04607	mg/L	0.003901	8.47%
Se 196.026†	-14.4	-0.01046	mg/L	0.001100	-0.05229	mg/L	0.005502	10.52%
Si 288.158†	1213.0	0.6018	mg/L	0.00382	3.009	mg/L	0.0191	0.64%
Sn 189.927†	11.2	0.04933	mg/L	0.001197	0.2466	mg/L	0.00598	2.43%
Sr 421.552†	1039989.3	1.186	mg/L	0.0047	5.928	mg/L	0.0234	0.40%
Ti 334.903†	53602.3	2.734	mg/L	0.0087	13.67	mg/L	0.043	0.32%
Tl 190.801†	0.3	0.00831	mg/L	0.001651	0.04153	mg/L	0.008254	19.87%
V 292.402†	23949.4	0.1926	mg/L	0.00287	0.9630	mg/L	0.01436	1.49%
Zn 206.200†	3221.5	0.8512	mg/L	0.00466	4.256	mg/L	0.0233	0.55%

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Sequence No.: 4
Sample ID: VS40 D SWC

Dilution: 5.000000X

Autosampler Location: 307
Date Collected: 11/15/2012 9:57:26 AM
Data Type: Original

Nebulizer Parameters: VS40 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 D SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508703.2	100.0	%	0.39				0.39%
ScR 361.383	329166.2	101.2	%	0.23				0.23%
Ag 328.068†	-268.4	-0.00155	mg/L	0.000275	-0.00775	mg/L	0.001374	17.72%
Al 308.215†	150839.0	89.30	mg/L	0.297	446.5	mg/L	1.49	0.33%
As 188.979†	-13.9	0.04708	mg/L	0.002153	0.2354	mg/L	0.01077	4.57%
B 249.677†	148.1	0.02012	mg/L	0.000487	0.1006	mg/L	0.00244	2.42%
Ba 233.527†	3703.6	0.8556	mg/L	0.00587	4.278	mg/L	0.0294	0.69%
Be 313.042†	836.5	0.00125	mg/L	0.000011	0.00625	mg/L	0.000057	0.91%
Ca 317.933†	4629760.9	347.6	mg/L	4.69	1738	mg/L	23.46	1.35%
Cd 228.802†	66.4	0.00136	mg/L	0.000118	0.00681	mg/L	0.000591	8.68%
Co 228.616†	1999.3	0.05497	mg/L	0.000254	0.2748	mg/L	0.00127	0.46%
Cr 267.716†	721.8	0.1220	mg/L	0.00128	0.6102	mg/L	0.00640	1.05%
Cu 324.752†	101242.1	0.4247	mg/L	0.00273	2.123	mg/L	0.0136	0.64%
Fe 273.955†	127205.6	104.3	mg/L	0.27	521.6	mg/L	1.35	0.26%
K 766.490†	9033.0	4.828	mg/L	0.0231	24.14	mg/L	0.115	0.48%
Mg 279.077†	37132.5	26.54	mg/L	0.054	132.7	mg/L	0.27	0.20%
Mn 257.610†	78905.4	2.327	mg/L	0.0059	11.64	mg/L	0.030	0.25%
Mo 202.031†	194.7	0.00650	mg/L	0.000377	0.03248	mg/L	0.001884	5.80%
Na 589.592†	29763.6	2.489	mg/L	0.0162	12.45	mg/L	0.081	0.65%
Na 330.237†	73.0	2.989	mg/L	0.1429	14.94	mg/L	0.715	4.78%
Ni 231.604†	382.8	0.09980	mg/L	0.000588	0.4990	mg/L	0.00294	0.59%
Pb 220.353†	7219.5	0.9626	mg/L	0.00158	4.813	mg/L	0.0079	0.16%
Sb 206.836†	26.7	0.00887	mg/L	0.001975	0.04434	mg/L	0.009873	22.26%
Se 196.026†	-11.0	-0.00803	mg/L	0.005942	-0.04013	mg/L	0.029708	74.03%
Si 288.158†	1050.8	0.5221	mg/L	0.00148	2.610	mg/L	0.0074	0.28%
Sn 189.927†	8.8	0.04579	mg/L	0.000982	0.2290	mg/L	0.00491	2.14%
Sr 421.552†	960540.4	1.095	mg/L	0.0096	5.475	mg/L	0.0479	0.87%
Ti 334.903†	51277.0	2.616	mg/L	0.0046	13.08	mg/L	0.023	0.18%
Tl 190.801†	-11.1	0.00544	mg/L	0.001736	0.02718	mg/L	0.008679	31.93%
V 292.402†	25829.2	0.2075	mg/L	0.00085	1.037	mg/L	0.0043	0.41%
Zn 206.200†	3358.9	0.8875	mg/L	0.00424	4.437	mg/L	0.0212	0.48%

Sequence No.: 5
Sample ID: VS40 E SWC

Autosampler Location: 308
Date Collected: 11/15/2012 10:01:44 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 E SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2512166.3	100.2	%	0.67				0.67%
ScR 361.383	318108.4	97.77	%	0.878				0.90%
Ag 328.068†	-315.3	-0.00184	mg/L	0.000104	-0.00922	mg/L	0.000519	5.63%
Al 308.215†	165547.1	98.01	mg/L	0.529	490.1	mg/L	2.64	0.54%
As 188.979†	4.9	0.04929	mg/L	0.001561	0.2464	mg/L	0.00780	3.17%
B 249.677†	181.7	0.02470	mg/L	0.000324	0.1235	mg/L	0.00162	1.31%
Ba 233.527†	4940.0	1.149	mg/L	0.0122	5.746	mg/L	0.0611	1.06%
Be 313.042†	899.5	0.00136	mg/L	0.000029	0.00679	mg/L	0.000144	2.13%
Ca 317.933†	5937492.1	445.7	mg/L	3.86	2229	mg/L	19.32	0.87%
Cd 228.802†	61.5	0.00124	mg/L	0.000121	0.00622	mg/L	0.000607	9.75%
Co 228.616†	2255.5	0.06320	mg/L	0.000421	0.3160	mg/L	0.00211	0.67%
Cr 267.716†	706.2	0.1183	mg/L	0.00047	0.5915	mg/L	0.00236	0.40%
Cu 324.752†	135815.4	0.5678	mg/L	0.00242	2.839	mg/L	0.0121	0.43%
Fe 273.955†	109995.9	90.21	mg/L	0.764	451.0	mg/L	3.82	0.85%
K 766.490†	8097.4	4.328	mg/L	0.0090	21.64	mg/L	0.045	0.21%
Mg 279.077†	27474.8	19.63	mg/L	0.103	98.17	mg/L	0.516	0.53%
Mn 257.610†	156703.9	4.623	mg/L	0.0359	23.11	mg/L	0.179	0.78%
Mo 202.031†	214.0	0.00645	mg/L	0.000059	0.03226	mg/L	0.000295	0.92%
Na 589.592†	28951.4	2.421	mg/L	0.0115	12.11	mg/L	0.057	0.47%
Na 330.237†	63.9	2.542	mg/L	0.0813	12.71	mg/L	0.407	3.20%
Ni 231.604†	314.5	0.08198	mg/L	0.001960	0.4099	mg/L	0.00980	2.39%
Pb 220.353†	42222.4	5.551	mg/L	0.0269	27.76	mg/L	0.135	0.49%
Sb 206.836†	40.5	0.01322	mg/L	0.002451	0.06611	mg/L	0.012255	18.54%
Se 196.026†	-17.0	-0.01230	mg/L	0.004929	-0.06152	mg/L	0.024644	40.06%
Si 288.158†	1153.2	0.5717	mg/L	0.00620	2.859	mg/L	0.0310	1.09%
Sn 189.927†	36.6	0.06566	mg/L	0.000986	0.3283	mg/L	0.00493	1.50%
Sr 421.552†	1207531.2	1.377	mg/L	0.0086	6.883	mg/L	0.0432	0.63%
Ti 334.903†	49404.2	2.515	mg/L	0.0173	12.57	mg/L	0.087	0.69%
Tl 190.801†	-2.2	0.00775	mg/L	0.003626	0.03875	mg/L	0.018131	46.79%
V 292.402†	20637.3	0.1658	mg/L	0.00099	0.8290	mg/L	0.00496	0.60%
Zn 206.200†	4365.1	1.154	mg/L	0.0116	5.768	mg/L	0.0582	1.01%

Sequence No.: 6
Sample ID: VS40 F SWC

Autosampler Location: 309
Date Collected: 11/15/2012 10:06:18 AM
Data Type: Original

Dilution: 5.000000X Del

Nebulizer Parameters: VS40 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2492617.6	99.40	%	0.335				0.34%
ScR 361.383	321477.9	98.81	%	0.350				0.35%
Ag 328.068†	-337.8	-0.00197	mg/L	0.000210	-0.00987	mg/L	0.001050	10.63%
Al 308.215†	154137.0	91.26	mg/L	0.815	456.3	mg/L	4.08	0.89%
As 188.979†	16.3	0.05300	mg/L	0.002213	0.2650	mg/L	0.01106	4.18%
B 249.677†	196.7	0.02676	mg/L	0.001413	0.1338	mg/L	0.00706	5.28%
Ba 233.527†	5960.3	1.389	mg/L	0.0047	6.944	mg/L	0.0236	0.34%
Be 313.042†	960.0	0.00145	mg/L	0.000006	0.00725	mg/L	0.000030	0.41%
Ca 317.933†	6797032.4	510.3	mg/L	1.58	2551	mg/L	7.89	0.31%
Cd 228.802†	64.4	0.00126	mg/L	0.000082	0.00630	mg/L	0.000408	6.47%
Co 228.616†	1973.7	0.05437	mg/L	0.000153	0.2719	mg/L	0.00077	0.28%
Cr 267.716†	789.1	0.1318	mg/L	0.00146	0.6592	mg/L	0.00730	1.11%
Cu 324.752†	130139.0	0.5444	mg/L	0.00261	2.722	mg/L	0.0131	0.48%
Fe 273.955†	116227.7	95.32	mg/L	1.121	476.6	mg/L	5.60	1.18%
K 766.490†	12407.5	6.631	mg/L	0.0421	33.16	mg/L	0.211	0.64%
Mg 279.077†	35498.4	25.38	mg/L	0.085	126.9	mg/L	0.42	0.33%
Mn 257.610†	73796.9	2.177	mg/L	0.0243	10.88	mg/L	0.121	1.11%
Mo 202.031†	230.6	0.00663	mg/L	0.000168	0.03315	mg/L	0.000838	2.53%
Na 589.592†	39709.8	3.321	mg/L	0.0327	16.61	mg/L	0.164	0.98%
Na 330.237†	93.2	3.613	mg/L	0.1159	18.06	mg/L	0.579	3.21%
Ni 231.604†	355.9	0.09278	mg/L	0.000907	0.4639	mg/L	0.00453	0.98%
Pb 220.353†	39240.5	5.159	mg/L	0.0087	25.79	mg/L	0.044	0.17%
Sb 206.836†	31.9	0.01034	mg/L	0.001185	0.05168	mg/L	0.005926	11.47%
Se 196.026†	-16.3	-0.01182	mg/L	0.007532	-0.05909	mg/L	0.037660	63.73%
Si 288.158†	1021.1	0.5072	mg/L	0.00589	2.536	mg/L	0.0295	1.16%
Sn 189.927†	44.4	0.07575	mg/L	0.001506	0.3788	mg/L	0.00753	1.99%
Sr 421.552†	1430464.9	1.631	mg/L	0.0162	8.153	mg/L	0.0808	0.99%
Ti 334.903†	50121.0	2.548	mg/L	0.0245	12.74	mg/L	0.122	0.96%
Tl 190.801†	-6.5	0.00647	mg/L	0.002678	0.03234	mg/L	0.013389	41.40%
V 292.402†	22787.0	0.1829	mg/L	0.00065	0.9146	mg/L	0.00326	0.36%
Zn 206.200†	4521.4	1.195	mg/L	0.0052	5.974	mg/L	0.0258	0.43%

Sequence No.: 7
Sample ID: VS40 ADUP SWC

Autosampler Location: 310
Date Collected: 11/15/2012 10:10:38 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2524256.0	100.7	%	0.25				0.25%
ScR 361.383	329244.4	101.2	%	0.86				0.85%
Ag 328.068†	-244.0	-0.00140	mg/L	0.000198	-0.00700	mg/L	0.000991	14.16%
Al 308.215†	153901.5	91.12	mg/L	0.421	455.6	mg/L	2.10	0.46%
As 188.979†	-16.0	0.05346	mg/L	0.002642	0.2673	mg/L	0.01321	4.94%
B 249.677†	123.7	0.01678	mg/L	0.000752	0.08388	mg/L	0.003758	4.48%
Ba 233.527†	3648.7	0.8411	mg/L	0.00761	4.205	mg/L	0.0380	0.90%
Be 313.042†	872.2	0.00130	mg/L	0.000027	0.00650	mg/L	0.000136	2.10%
Ca 317.933†	4119950.9	309.3	mg/L	3.35	1547	mg/L	16.74	1.08%
Cd 228.802†	69.0	0.00137	mg/L	0.000173	0.00686	mg/L	0.000864	12.60%
Co 228.616†	2150.9	0.05915	mg/L	0.000445	0.2957	mg/L	0.00222	0.75%
Cr 267.716†	769.0	0.1305	mg/L	0.00086	0.6524	mg/L	0.00432	0.66%
Cu 324.752†	106520.6	0.4470	mg/L	0.00275	2.235	mg/L	0.0137	0.61%
Fe 273.955†	138733.4	113.8	mg/L	0.60	568.9	mg/L	3.01	0.53%
K 766.490†	7943.2	4.245	mg/L	0.0122	21.23	mg/L	0.061	0.29%
Mg 279.077†	43113.9	30.82	mg/L	0.203	154.1	mg/L	1.02	0.66%
Mn 257.610†	81908.5	2.416	mg/L	0.0115	12.08	mg/L	0.057	0.47%
Mo 202.031†	181.3	0.00620	mg/L	0.000311	0.03102	mg/L	0.001556	5.01%
Na 589.592†	26070.1	2.180	mg/L	0.0114	10.90	mg/L	0.057	0.52%
Na 330.237†	62.0	2.661	mg/L	0.0457	13.30	mg/L	0.229	1.72%
Ni 231.604†	409.8	0.1068	mg/L	0.00069	0.5341	mg/L	0.00345	0.65%
Pb 220.353†	14307.3	1.891	mg/L	0.0067	9.457	mg/L	0.0337	0.36%
Sb 206.836†	29.9	0.00986	mg/L	0.001110	0.04930	mg/L	0.005548	11.26%
Se 196.026†	-14.0	-0.01023	mg/L	0.005289	-0.05113	mg/L	0.026445	51.72%
Si 288.158†	1530.4	0.7594	mg/L	0.00949	3.797	mg/L	0.0475	1.25%
Sn 189.927†	-12.5	0.03532	mg/L	0.000920	0.1766	mg/L	0.00460	2.61%
Sr 421.552†	932428.1	1.063	mg/L	0.0105	5.315	mg/L	0.0525	0.99%
Ti 334.903†	54922.5	2.804	mg/L	0.0128	14.02	mg/L	0.064	0.46%
Tl 190.801†	-6.8	0.00815	mg/L	0.000911	0.04073	mg/L	0.004556	11.18%
V 292.402†	27673.4	0.2222	mg/L	0.00111	1.111	mg/L	0.0055	0.50%
Zn 206.200†	2943.4	0.7778	mg/L	0.00826	3.889	mg/L	0.0413	1.06%

Sequence No.: 8
Sample ID: VS40 A SWC

Autosampler Location: 311
Date Collected: 11/15/2012 10:14:56 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 A SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2531572.4	100.9	%	0.35				0.35%
ScR 361.383	332432.6	102.2	%	0.16				0.16%
Ag 328.068†	-235.0	-0.00135	mg/L	0.000113	-0.00673	mg/L	0.000563	8.36%
Al 308.215†	159696.8	94.55	mg/L	0.330	472.7	mg/L	1.65	0.35%
As 188.979†	-19.4	0.05556	mg/L	0.002779	0.2778	mg/L	0.01390	5.00%
B 249.677†	145.8	0.01979	mg/L	0.000749	0.09896	mg/L	0.003746	3.78%
Ba 233.527†	3791.7	0.8750	mg/L	0.00151	4.375	mg/L	0.0075	0.17%
Be 313.042†	886.3	0.00132	mg/L	0.000032	0.00660	mg/L	0.000158	2.40%
Ca 317.933†	4217773.5	316.6	mg/L	0.41	1583	mg/L	2.03	0.13%
Cd 228.802†	64.0	0.00124	mg/L	0.000079	0.00618	mg/L	0.000396	6.41%
Co 228.616†	2141.7	0.05858	mg/L	0.000323	0.2929	mg/L	0.00162	0.55%
Cr 267.716†	852.4	0.1447	mg/L	0.00052	0.7234	mg/L	0.00259	0.36%
Cu 324.752†	111068.6	0.4658	mg/L	0.00207	2.329	mg/L	0.0103	0.44%
Fe 273.955†	136930.4	112.3	mg/L	0.42	561.5	mg/L	2.09	0.37%
K 766.490†	9898.0	5.290	mg/L	0.0116	26.45	mg/L	0.058	0.22%
Mg 279.077†	42436.7	30.34	mg/L	0.086	151.7	mg/L	0.43	0.28%
Mn 257.610†	83381.5	2.460	mg/L	0.0078	12.30	mg/L	0.039	0.32%
Mo 202.031†	177.3	0.00591	mg/L	0.000069	0.02957	mg/L	0.000346	1.17%
Na 589.592†	29809.8	2.493	mg/L	0.0034	12.47	mg/L	0.017	0.14%
Na 330.237†	68.1	2.918	mg/L	0.0789	14.59	mg/L	0.395	2.71%
Ni 231.604†	420.9	0.1097	mg/L	0.00107	0.5486	mg/L	0.00533	0.97%
Pb 220.353†	14588.5	1.929	mg/L	0.0077	9.645	mg/L	0.0383	0.40%
Sb 206.836†	32.1	0.01041	mg/L	0.000489	0.05205	mg/L	0.002445	4.70%
Se 196.026†	-6.5	-0.00480	mg/L	0.002713	-0.02398	mg/L	0.013563	56.55%
Si 288.158†	1440.1	0.7148	mg/L	0.00058	3.574	mg/L	0.0029	0.08%
Sn 189.927†	-13.2	0.03607	mg/L	0.000638	0.1804	mg/L	0.00319	1.77%
Sr 421.552†	951091.8	1.084	mg/L	0.0036	5.421	mg/L	0.0181	0.33%
Ti 334.903†	57957.6	2.960	mg/L	0.0114	14.80	mg/L	0.057	0.39%
Tl 190.801†	-9.2	0.00699	mg/L	0.000897	0.03497	mg/L	0.004484	12.82%
V 292.402†	27504.7	0.2208	mg/L	0.00101	1.104	mg/L	0.0051	0.46%
Zn 206.200†	2997.3	0.7920	mg/L	0.00217	3.960	mg/L	0.0109	0.27%

Sequence No.: 9
Sample ID: VS40 ASPK SWC

Autosampler Location: 312
Date Collected: 11/15/2012 10:19:14 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2578618.3	102.8	%	0.54				0.52%
ScR 361.383	333886.4	102.6	%	0.14				0.13%
Ag 328.068†	32313.8	0.1941	mg/L	0.00027	0.9707	mg/L	0.00137	0.14%
Al 308.215†	152951.4	90.55	mg/L	0.202	452.8	mg/L	1.01	0.22%
As 188.979†	1385.3	0.8391	mg/L	0.00485	4.196	mg/L	0.0243	0.58%
B 249.677†	129.0	0.01708	mg/L	0.000511	0.08541	mg/L	0.002553	2.99%
Ba 233.527†	7437.9	1.734	mg/L	0.0082	8.668	mg/L	0.0410	0.47%
Be 313.042†	123601.8	0.1954	mg/L	0.00084	0.9769	mg/L	0.00420	0.43%
Ca 317.933†	4287066.7	321.8	mg/L	0.68	1609	mg/L	3.40	0.21%
Cd 228.802†	6725.5	0.2195	mg/L	0.00113	1.097	mg/L	0.0057	0.52%
Co 228.616†	8790.5	0.2637	mg/L	0.00138	1.319	mg/L	0.0069	0.52%
Cr 267.716†	1939.2	0.3308	mg/L	0.00319	1.654	mg/L	0.0159	0.96%
Cu 324.752†	155987.1	0.6528	mg/L	0.00060	3.264	mg/L	0.0030	0.09%
Fe 273.955†	141801.0	116.3	mg/L	0.48	581.4	mg/L	2.41	0.41%
K 766.490†	15474.0	8.270	mg/L	0.0669	41.35	mg/L	0.335	0.81%
Mg 279.077†	44566.9	31.86	mg/L	0.065	159.3	mg/L	0.32	0.20%
Mn 257.610†	102248.7	3.017	mg/L	0.0100	15.08	mg/L	0.050	0.33%
Mo 202.031†	177.1	0.00584	mg/L	0.000218	0.02919	mg/L	0.001090	3.74%
Na 589.592†	75033.7	6.276	mg/L	0.0312	31.38	mg/L	0.156	0.50%
Na 330.237†	180.5	6.883	mg/L	0.2142	34.42	mg/L	1.071	3.11%
Ni 231.604†	1145.8	0.2984	mg/L	0.00210	1.492	mg/L	0.0105	0.70%
Pb 220.353†	30474.1	4.009	mg/L	0.0197	20.05	mg/L	0.099	0.49%
Sb 206.836†	55.2	0.01577	mg/L	0.001303	0.07884	mg/L	0.006516	8.27%
Se 196.026†	1079.8	0.7751	mg/L	0.00485	3.876	mg/L	0.0243	0.63%
Si 288.158†	1371.0	0.6817	mg/L	0.00221	3.408	mg/L	0.0111	0.32%
Sn 189.927†	-3.9	0.03925	mg/L	0.001298	0.1963	mg/L	0.00649	3.31%
Sr 421.552†	1124898.8	1.282	mg/L	0.0056	6.412	mg/L	0.0278	0.43%
Ti 334.903†	50025.5	2.552	mg/L	0.0069	12.76	mg/L	0.035	0.27%
Tl 190.801†	1771.8	0.7472	mg/L	0.00237	3.736	mg/L	0.0119	0.32%
V 292.402†	48862.1	0.3969	mg/L	0.00098	1.984	mg/L	0.0049	0.25%
Zn 206.200†	3795.3	1.003	mg/L	0.0096	5.015	mg/L	0.0479	0.95%

Sequence No.: 10
Sample ID: VS40 MB1SPK SWC

Autosampler Location: 313
Date Collected: 11/15/2012 10:23:17 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS40 MB1SPK SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631417.7	104.9	%	0.10				0.09%
ScR 361.383	334041.5	102.7	%	1.89				1.84%
Ag 328.068†	83819.1	0.5035	mg/L	0.00117	1.007	mg/L	0.0023	0.23%
Al 308.215†	3468.1	2.046	mg/L	0.0404	4.092	mg/L	0.0809	1.98%
As 188.979†	3407.5	1.929	mg/L	0.0105	3.858	mg/L	0.0211	0.55%
B 249.677†	7.5	-0.00002	mg/L	0.000079	-0.00005	mg/L	0.000158	341.68%
Ba 233.527†	8909.4	2.099	mg/L	0.0470	4.198	mg/L	0.0940	2.24%
Be 313.042†	301550.7	0.4769	mg/L	0.01143	0.9537	mg/L	0.02285	2.40%
Ca 317.933†	133278.2	10.01	mg/L	0.195	20.01	mg/L	0.389	1.94%
Cd 228.802†	15854.6	0.5192	mg/L	0.00156	1.038	mg/L	0.0031	0.30%
Co 228.616†	16627.7	0.5112	mg/L	0.00044	1.022	mg/L	0.0009	0.09%
Cr 267.716†	3037.5	0.5195	mg/L	0.01116	1.039	mg/L	0.0223	2.15%
Cu 324.752†	120631.5	0.5015	mg/L	0.00085	1.003	mg/L	0.0017	0.17%
Fe 273.955†	2538.7	2.078	mg/L	0.0426	4.157	mg/L	0.0851	2.05%
K 766.490†	18339.2	9.801	mg/L	0.2505	19.60	mg/L	0.501	2.56%
Mg 279.077†	14403.7	10.32	mg/L	0.218	20.64	mg/L	0.436	2.11%
Mn 257.610†	17266.0	0.5097	mg/L	0.01071	1.019	mg/L	0.0214	2.10%
Mo 202.031†	24.8	0.00117	mg/L	0.000120	0.00234	mg/L	0.000239	10.21%
Na 589.592†	114028.7	9.537	mg/L	0.2349	19.07	mg/L	0.470	2.46%
Na 330.237†	283.3	10.24	mg/L	0.226	20.48	mg/L	0.453	2.21%
Ni 231.604†	1889.1	0.4916	mg/L	0.01110	0.9832	mg/L	0.02220	2.26%
Pb 220.353†	14338.1	1.879	mg/L	0.0037	3.759	mg/L	0.0075	0.20%
Sb 206.836†	13.9	-0.00099	mg/L	0.000451	-0.00198	mg/L	0.000901	45.43%
Se 196.026†	2664.2	1.913	mg/L	0.0139	3.826	mg/L	0.0278	0.73%
Si 288.158†	-10.7	-0.00211	mg/L	0.000971	-0.00422	mg/L	0.001943	46.03%
Sn 189.927†	-18.2	-0.00366	mg/L	0.001234	-0.00733	mg/L	0.002467	33.67%
Sr 421.552†	424655.8	0.4841	mg/L	0.01182	0.9682	mg/L	0.02363	2.44%
Ti 334.903†	57.0	0.00235	mg/L	0.000372	0.00469	mg/L	0.000743	15.84%
Tl 190.801†	4568.1	1.897	mg/L	0.0115	3.795	mg/L	0.0230	0.61%
V 292.402†	62459.5	0.5142	mg/L	0.00149	1.028	mg/L	0.0030	0.29%
Zn 206.200†	1867.3	0.4934	mg/L	0.00958	0.9869	mg/L	0.01915	1.94%

Sequence No.: 11
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 11/15/2012 10:27:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2565536.0	102.3	%	0.28				0.28%
ScR 361.383	325427.9	100.0	%	0.92				0.92%
Ag 328.068†	165698.7	0.9953	mg/L	0.00413	0.9953	mg/L	0.00413	0.42%
Al 308.215†	3491.8	2.033	mg/L	0.0223	2.033	mg/L	0.0223	1.10%
As 188.979†	3452.0	1.980	mg/L	0.0083	1.980	mg/L	0.0083	0.42%
B 249.677†	7159.1	0.9773	mg/L	0.01408	0.9773	mg/L	0.01408	1.44%
Ba 233.527†	4481.2	1.055	mg/L	0.0158	1.055	mg/L	0.0158	1.50%
Be 313.042†	595968.1	0.9424	mg/L	0.01561	0.9424	mg/L	0.01561	1.66%
Ca 317.933†	26637.7	2.000	mg/L	0.0321	2.000	mg/L	0.0321	1.60%
Cd 228.802†	31240.6	1.035	mg/L	0.0061	1.035	mg/L	0.0061	0.59%
Co 228.616†	33307.4	1.022	mg/L	0.0054	1.022	mg/L	0.0054	0.53%
Cr 267.716†	6093.6	1.044	mg/L	0.0143	1.044	mg/L	0.0143	1.37%
Cu 324.752†	240463.1	0.9991	mg/L	0.00265	0.9991	mg/L	0.00265	0.27%
Fe 273.955†	2539.8	2.076	mg/L	0.0265	2.076	mg/L	0.0265	1.28%
K 766.490†	37418.2	20.00	mg/L	0.269	20.00	mg/L	0.269	1.35%
Mg 279.077†	2873.1	2.065	mg/L	0.0346	2.065	mg/L	0.0346	1.67%
Mn 257.610†	33676.1	0.9938	mg/L	0.01564	0.9938	mg/L	0.01564	1.57%
Mo 202.031†	18736.8	0.9874	mg/L	0.00316	0.9874	mg/L	0.00316	0.32%
Na 589.592†	590463.3	49.39	mg/L	0.819	49.39	mg/L	0.819	1.66%
Na 330.237†	1428.7	52.36	mg/L	0.309	52.36	mg/L	0.309	0.59%
Ni 231.604†	3796.6	0.9899	mg/L	0.01505	0.9899	mg/L	0.01505	1.52%
Pb 220.353†	14529.4	1.905	mg/L	0.0089	1.905	mg/L	0.0089	0.47%
Sb 206.836†	6489.5	2.096	mg/L	0.0124	2.096	mg/L	0.0124	0.59%
Se 196.026†	2690.2	1.931	mg/L	0.0067	1.931	mg/L	0.0067	0.35%
Si 288.158†	4273.2	2.109	mg/L	0.0287	2.109	mg/L	0.0287	1.36%
Sn 189.927†	3700.7	1.010	mg/L	0.0034	1.010	mg/L	0.0034	0.34%
Sr 421.552†	847049.9	0.9656	mg/L	0.01471	0.9656	mg/L	0.01471	1.52%
Ti 334.903†	20037.8	1.027	mg/L	0.0159	1.027	mg/L	0.0159	1.55%
Tl 190.801†	4701.5	1.949	mg/L	0.0069	1.949	mg/L	0.0069	0.36%
V 292.402†	125979.2	1.037	mg/L	0.0042	1.037	mg/L	0.0042	0.40%
Zn 206.200†	3877.6	1.024	mg/L	0.0154	1.024	mg/L	0.0154	1.50%

Sequence No.: 12
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/15/2012 10:32:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2584539.0	103.1	%	0.63				0.62%
ScR 361.383	326278.4	100.3	%	0.59				0.59%
Ag 328.068†	23.0	0.00014	mg/L	0.000031	0.00014	mg/L	0.000031	22.78%
Al 308.215†	12.1	0.00712	mg/L	0.002343	0.00712	mg/L	0.002343	32.91%
As 188.979†	1.6	0.00097	mg/L	0.001505	0.00097	mg/L	0.001505	155.45%
B 249.677†	16.4	0.00224	mg/L	0.000530	0.00224	mg/L	0.000530	23.63%
Ba 233.527†	2.0	0.00048	mg/L	0.000085	0.00048	mg/L	0.000085	17.71%
Be 313.042†	69.4	0.00011	mg/L	0.000014	0.00011	mg/L	0.000014	12.95%
Ca 317.933†	241.7	0.01814	mg/L	0.001339	0.01814	mg/L	0.001339	7.38%
Cd 228.802†	4.2	0.00013	mg/L	0.000126	0.00013	mg/L	0.000126	94.39%
Co 228.616†	13.7	0.00042	mg/L	0.000056	0.00042	mg/L	0.000056	13.53%
Cr 267.716†	-3.8	-0.00065	mg/L	0.000463	-0.00065	mg/L	0.000463	70.84%
Cu 324.752†	22.9	0.00009	mg/L	0.000059	0.00009	mg/L	0.000059	62.02%
Fe 273.955†	9.8	0.00808	mg/L	0.001836	0.00808	mg/L	0.001836	22.74%
K 766.490†	-5.4	-0.00286	mg/L	0.018856	-0.00286	mg/L	0.018856	659.35%
Mg 279.077†	5.8	0.00412	mg/L	0.005386	0.00412	mg/L	0.005386	130.68%
Mn 257.610†	6.4	0.00019	mg/L	0.000190	0.00019	mg/L	0.000190	100.82%
Mo 202.031†	16.0	0.00084	mg/L	0.000196	0.00084	mg/L	0.000196	23.20%
Na 589.592†	52.0	0.00435	mg/L	0.001854	0.00435	mg/L	0.001854	42.62%
Na 330.237†	1.9	0.07061	mg/L	0.104915	0.07061	mg/L	0.104915	148.58%
Ni 231.604†	-2.2	-0.00056	mg/L	0.000805	-0.00056	mg/L	0.000805	143.23%
Pb 220.353†	7.4	0.00097	mg/L	0.000619	0.00097	mg/L	0.000619	63.57%
Sb 206.836†	10.0	0.00323	mg/L	0.000841	0.00323	mg/L	0.000841	26.02%
Se 196.026†	4.0	0.00287	mg/L	0.001445	0.00287	mg/L	0.001445	50.28%
Si 288.158†	-6.3	-0.00310	mg/L	0.000757	-0.00310	mg/L	0.000757	24.41%
Sn 189.927†	-0.4	-0.00011	mg/L	0.000916	-0.00011	mg/L	0.000916	854.54%
Sr 421.552†	194.6	0.00022	mg/L	0.000033	0.00022	mg/L	0.000033	14.82%
Ti 334.903†	29.7	0.00152	mg/L	0.000478	0.00152	mg/L	0.000478	31.40%
Tl 190.801†	-1.1	-0.00046	mg/L	0.001025	-0.00046	mg/L	0.001025	224.36%
V 292.402†	-3.3	-0.00003	mg/L	0.000073	-0.00003	mg/L	0.000073	236.27%
Zn 206.200†	2.1	0.00055	mg/L	0.000424	0.00055	mg/L	0.000424	77.79%

Sequence No.: 13
Sample ID: VS40 G SWC

Autosampler Location: 314
Date Collected: 11/15/2012 10:36:42 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 G SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2528790.1	100.8	%	0.52				0.52%
ScR 361.383	331288.1	101.8	%	0.35				0.34%
Ag 328.068†	-224.4	-0.00129	mg/L	0.000061	-0.00646	mg/L	0.000303	4.69%
Al 308.215†	145918.8	86.39	mg/L	0.693	432.0	mg/L	3.46	0.80%
As 188.979†	-20.4	0.05047	mg/L	0.003185	0.2524	mg/L	0.01593	6.31%
B 249.677†	164.4	0.02236	mg/L	0.001268	0.1118	mg/L	0.00634	5.67%
Ba 233.527†	3774.6	0.8735	mg/L	0.00080	4.367	mg/L	0.0040	0.09%
Be 313.042†	846.9	0.00127	mg/L	0.000015	0.00633	mg/L	0.000075	1.18%
Ca 317.933†	4657046.6	349.6	mg/L	2.28	1748	mg/L	11.39	0.65%
Cd 228.802†	61.5	0.00128	mg/L	0.000110	0.00640	mg/L	0.000551	8.60%
Co 228.616†	1861.5	0.05034	mg/L	0.000491	0.2517	mg/L	0.00245	0.98%
Cr 267.716†	836.0	0.1415	mg/L	0.00028	0.7074	mg/L	0.00138	0.19%
Cu 324.752†	102386.9	0.4291	mg/L	0.00521	2.145	mg/L	0.0261	1.21%
Fe 273.955†	118675.7	97.33	mg/L	0.565	486.6	mg/L	2.82	0.58%
K 766.490†	9027.8	4.825	mg/L	0.0805	24.12	mg/L	0.403	1.67%
Mg 279.077†	34823.6	24.89	mg/L	0.153	124.5	mg/L	0.76	0.61%
Mn 257.610†	72444.4	2.137	mg/L	0.0131	10.69	mg/L	0.066	0.61%
Mo 202.031†	187.2	0.00608	mg/L	0.000384	0.03040	mg/L	0.001920	6.32%
Na 589.592†	32398.3	2.710	mg/L	0.0294	13.55	mg/L	0.147	1.08%
Na 330.237†	78.9	3.264	mg/L	0.0656	16.32	mg/L	0.328	2.01%
Ni 231.604†	338.8	0.08833	mg/L	0.000559	0.4416	mg/L	0.00280	0.63%
Pb 220.353†	27225.8	3.584	mg/L	0.0690	17.92	mg/L	0.345	1.93%
Sb 206.836†	48.2	0.01557	mg/L	0.001157	0.07786	mg/L	0.005785	7.43%
Se 196.026†	-10.5	-0.00767	mg/L	0.004786	-0.03837	mg/L	0.023932	62.37%
Si 288.158†	1152.8	0.5722	mg/L	0.00758	2.861	mg/L	0.0379	1.32%
Sn 189.927†	12.9	0.04728	mg/L	0.001404	0.2364	mg/L	0.00702	2.97%
Sr 421.552†	969800.8	1.106	mg/L	0.0109	5.528	mg/L	0.0545	0.99%
Ti 334.903†	56174.4	2.867	mg/L	0.0221	14.33	mg/L	0.110	0.77%
Tl 190.801†	-1.8	0.00863	mg/L	0.000758	0.04313	mg/L	0.003788	8.78%
V 292.402†	23615.7	0.1895	mg/L	0.00227	0.9474	mg/L	0.01133	1.20%
Zn 206.200†	3350.1	0.8853	mg/L	0.00296	4.427	mg/L	0.0148	0.33%

Sequence No.: 14
Sample ID: VS40 H SWC

Del

Dilution: 5.000000X

Autosampler Location: 315
Date Collected: 11/15/2012 10:41:01 AM
Data Type: Original

Nebulizer Parameters: VS40 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540170.7	101.3	%	0.20				0.19%
ScR 361.383	322111.1	99.00	%	0.604				0.61%
Ag 328.068†	-314.8	-0.00183	mg/L	0.000073	-0.00914	mg/L	0.000363	3.97%
Al 308.215†	169739.0	100.5	mg/L	0.51	502.5	mg/L	2.53	0.50%
As 188.979†	33.2	0.06262	mg/L	0.003438	0.3131	mg/L	0.01719	5.49%
B 249.677†	189.9	0.02583	mg/L	0.000843	0.1291	mg/L	0.00421	3.26%
Ba 233.527†	5011.7	1.163	mg/L	0.0101	5.817	mg/L	0.0506	0.87%
Be 313.042†	961.6	0.00144	mg/L	0.000031	0.00722	mg/L	0.000154	2.13%
Ca 317.933†	8014703.3	601.7	mg/L	7.45	3008	mg/L	37.24	1.24%
Cd 228.802†	75.0	0.00145	mg/L	0.000011	0.00723	mg/L	0.000055	0.75%
Co 228.616†	2270.7	0.06300	mg/L	0.000190	0.3150	mg/L	0.00095	0.30%
Cr 267.716†	1014.2	0.1700	mg/L	0.00234	0.8500	mg/L	0.01172	1.38%
Cu 324.752†	130689.0	0.5472	mg/L	0.00172	2.736	mg/L	0.0086	0.31%
Fe 273.955†	130692.0	107.2	mg/L	0.36	535.9	mg/L	1.79	0.33%
K 766.490†	11455.9	6.122	mg/L	0.0697	30.61	mg/L	0.349	1.14%
Mg 279.077†	35395.2	25.30	mg/L	0.150	126.5	mg/L	0.75	0.59%
Mn 257.610†	81469.8	2.402	mg/L	0.0091	12.01	mg/L	0.046	0.38%
Mo 202.031†	284.1	0.00846	mg/L	0.000230	0.04229	mg/L	0.001151	2.72%
Na 589.592†	41868.9	3.502	mg/L	0.0141	17.51	mg/L	0.070	0.40%
Na 330.237†	109.0	4.134	mg/L	0.1089	20.67	mg/L	0.544	2.63%
Ni 231.604†	388.5	0.1013	mg/L	0.00235	0.5063	mg/L	0.01174	2.32%
Pb 220.353†	8924.1	1.188	mg/L	0.0036	5.942	mg/L	0.0180	0.30%
Sb 206.836†	35.9	0.01131	mg/L	0.002762	0.05657	mg/L	0.013810	24.41%
Se 196.026†	-14.0	-0.01023	mg/L	0.003680	-0.05116	mg/L	0.018399	35.96%
Si 288.158†	1272.9	0.6315	mg/L	0.00967	3.157	mg/L	0.0484	1.53%
Sn 189.927†	66.8	0.09305	mg/L	0.002557	0.4652	mg/L	0.01278	2.75%
Sr 421.552†	1549697.3	1.767	mg/L	0.0079	8.833	mg/L	0.0396	0.45%
Ti 334.903†	53813.5	2.734	mg/L	0.0119	13.67	mg/L	0.059	0.43%
Tl 190.801†	-11.7	0.00540	mg/L	0.002267	0.02698	mg/L	0.011333	42.01%
V 292.402†	26496.3	0.2130	mg/L	0.00094	1.065	mg/L	0.0047	0.44%
Zn 206.200†	5690.0	1.503	mg/L	0.0166	7.517	mg/L	0.0831	1.11%

Sequence No.: 15
Sample ID: VS40 I SWC

Dilution: 5.000000X

Del

Autosampler Location: 316
Date Collected: 11/15/2012 10:45:07 AM
Data Type: Original

Nebulizer Parameters: VS40 I SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2509223.8	100.1	%	0.40				0.40%
ScR 361.383	323833.9	99.53	%	0.839				0.84%
Ag 328.068†	-287.1	-0.00166	mg/L	0.000171	-0.00830	mg/L	0.000855	10.29%
Al 308.215†	172132.2	101.9	mg/L	0.51	509.6	mg/L	2.55	0.50%
As 188.979†	28.1	0.06711	mg/L	0.001268	0.3355	mg/L	0.00634	1.89%
B 249.677†	192.2	0.02613	mg/L	0.001036	0.1307	mg/L	0.00518	3.97%
Ba 233.527†	5005.6	1.162	mg/L	0.0124	5.810	mg/L	0.0618	1.06%
Be 313.042†	936.0	0.00140	mg/L	0.000024	0.00700	mg/L	0.000121	1.73%
Ca 317.933†	7963555.8	597.9	mg/L	8.77	2989	mg/L	43.83	1.47%
Cd 228.802†	74.0	0.00144	mg/L	0.000051	0.00718	mg/L	0.000257	3.57%
Co 228.616†	2261.0	0.06223	mg/L	0.000092	0.3111	mg/L	0.00046	0.15%
Cr 267.716†	1025.3	0.1718	mg/L	0.00150	0.8592	mg/L	0.00750	0.87%
Cu 324.752†	131794.1	0.5517	mg/L	0.00129	2.759	mg/L	0.0064	0.23%
Fe 273.955†	130451.0	107.0	mg/L	0.64	534.9	mg/L	3.22	0.60%
K 766.490†	11821.5	6.318	mg/L	0.0387	31.59	mg/L	0.193	0.61%
Mg 279.077†	36920.9	26.39	mg/L	0.091	132.0	mg/L	0.46	0.35%
Mn 257.610†	83808.6	2.471	mg/L	0.0156	12.36	mg/L	0.078	0.63%
Mo 202.031†	282.6	0.00842	mg/L	0.000074	0.04211	mg/L	0.000368	0.87%
Na 589.592†	42215.9	3.531	mg/L	0.0262	17.65	mg/L	0.131	0.74%
Na 330.237†	107.7	4.148	mg/L	0.2218	20.74	mg/L	1.109	5.35%
Ni 231.604†	399.2	0.1041	mg/L	0.00136	0.5204	mg/L	0.00682	1.31%
Pb 220.353†	19034.4	2.513	mg/L	0.0147	12.57	mg/L	0.073	0.58%
Sb 206.836†	46.8	0.01495	mg/L	0.001922	0.07476	mg/L	0.009612	12.86%
Se 196.026†	-12.1	-0.00887	mg/L	0.006601	-0.04436	mg/L	0.033003	74.40%
Si 288.158†	1111.7	0.5520	mg/L	0.00840	2.760	mg/L	0.0420	1.52%
Sn 189.927†	73.5	0.09448	mg/L	0.001723	0.4724	mg/L	0.00861	1.82%
Sr 421.552†	1542574.1	1.758	mg/L	0.0092	8.792	mg/L	0.0458	0.52%
Ti 334.903†	58677.2	2.983	mg/L	0.0147	14.92	mg/L	0.073	0.49%
Tl 190.801†	-9.4	0.00634	mg/L	0.001679	0.03172	mg/L	0.008396	26.47%
V 292.402†	26587.8	0.2136	mg/L	0.00048	1.068	mg/L	0.0024	0.22%
Zn 206.200†	5662.1	1.496	mg/L	0.0130	7.480	mg/L	0.0652	0.87%

Sequence No.: 16
Sample ID: VS40 J SWC

Dilution: 5.000000X

Autosampler Location: 317
Date Collected: 11/15/2012 10:49:14 AM
Data Type: Original

Nebulizer Parameters: VS40 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540956.7	101.3	%	0.74				0.73%
ScR 361.383	326122.7	100.2	%	0.34				0.34%
Ag 328.068†	-265.6	-0.00153	mg/L	0.000111	-0.00766	mg/L	0.000553	7.22%
Al 308.215†	168341.8	99.67	mg/L	0.602	498.3	mg/L	3.01	0.60%
As 188.979†	25.8	0.06201	mg/L	0.003052	0.3100	mg/L	0.01526	4.92%
B 249.677†	166.7	0.02266	mg/L	0.000901	0.1133	mg/L	0.00451	3.98%
Ba 233.527†	4509.9	1.046	mg/L	0.0025	5.228	mg/L	0.0127	0.24%
Be 313.042†	908.5	0.00136	mg/L	0.000028	0.00680	mg/L	0.000142	2.08%
Ca 317.933†	7139445.1	536.0	mg/L	1.65	2680	mg/L	8.25	0.31%
Cd 228.802†	66.3	0.00121	mg/L	0.000103	0.00607	mg/L	0.000513	8.45%
Co 228.616†	2245.5	0.06229	mg/L	0.000651	0.3114	mg/L	0.00325	1.05%
Cr 267.716†	926.6	0.1553	mg/L	0.00134	0.7764	mg/L	0.00672	0.87%
Cu 324.752†	121798.9	0.5101	mg/L	0.00183	2.550	mg/L	0.0092	0.36%
Fe 273.955†	127364.5	104.5	mg/L	0.29	522.3	mg/L	1.47	0.28%
K 766.490†	10745.0	5.743	mg/L	0.0283	28.71	mg/L	0.142	0.49%
Mg 279.077†	38836.3	27.76	mg/L	0.121	138.8	mg/L	0.61	0.44%
Mn 257.610†	83505.2	2.462	mg/L	0.0102	12.31	mg/L	0.051	0.42%
Mo 202.031†	264.2	0.00812	mg/L	0.000460	0.04062	mg/L	0.002298	5.66%
Na 589.592†	39196.3	3.278	mg/L	0.0330	16.39	mg/L	0.165	1.01%
Na 330.237†	93.8	3.625	mg/L	0.1807	18.12	mg/L	0.904	4.99%
Ni 231.604†	402.2	0.1048	mg/L	0.00235	0.5242	mg/L	0.01177	2.25%
Pb 220.353†	10174.2	1.352	mg/L	0.0162	6.761	mg/L	0.0810	1.20%
Sb 206.836†	25.6	0.00817	mg/L	0.001704	0.04086	mg/L	0.008518	20.85%
Se 196.026†	-7.9	-0.00581	mg/L	0.002436	-0.02907	mg/L	0.012179	41.89%
Si 288.158†	1169.2	0.5806	mg/L	0.00415	2.903	mg/L	0.0208	0.72%
Sn 189.927†	50.3	0.08042	mg/L	0.001052	0.4021	mg/L	0.00526	1.31%
Sr 421.552†	1374844.8	1.567	mg/L	0.0107	7.836	mg/L	0.0533	0.68%
Ti 334.903†	53636.3	2.728	mg/L	0.0150	13.64	mg/L	0.075	0.55%
Tl 190.801†	-2.5	0.00896	mg/L	0.000367	0.04481	mg/L	0.001833	4.09%
V 292.402†	26623.5	0.2141	mg/L	0.00048	1.070	mg/L	0.0024	0.22%
Zn 206.200†	5144.4	1.359	mg/L	0.0021	6.796	mg/L	0.0104	0.15%

Sequence No.: 17
Sample ID: VS40 F SWC

Autosampler Location: 318
Date Collected: 11/15/2012 10:53:20 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2546660.3	101.6	%	0.21				0.21%
ScR 361.383	324720.5	99.81	%	0.927				0.93%
Ag 328.068†	-197.6	-0.00116	mg/L	0.000258	-0.01159	mg/L	0.002579	22.25%
Al 308.215†	77391.4	45.82	mg/L	0.632	458.2	mg/L	6.32	1.38%
As 188.979†	26.5	0.03737	mg/L	0.001158	0.3737	mg/L	0.01158	3.10%
B 249.677†	94.3	0.01283	mg/L	0.001093	0.1283	mg/L	0.01093	8.52%
Ba 233.527†	2991.6	0.6967	mg/L	0.00800	6.967	mg/L	0.0800	1.15%
Be 313.042†	503.9	0.00076	mg/L	0.000040	0.00762	mg/L	0.000400	5.25%
Ca 317.933†	3456568.7	259.5	mg/L	1.50	2595	mg/L	15.03	0.58%
Cd 228.802†	38.1	0.00074	mg/L	0.000089	0.00738	mg/L	0.000890	12.06%
Co 228.616†	1028.9	0.02840	mg/L	0.000276	0.2840	mg/L	0.00276	0.97%
Cr 267.716†	410.6	0.06875	mg/L	0.000608	0.6875	mg/L	0.00608	0.88%
Cu 324.752†	63792.2	0.2670	mg/L	0.00089	2.670	mg/L	0.0089	0.33%
Fe 273.955†	60797.7	49.86	mg/L	0.580	498.6	mg/L	5.80	1.16%
K 766.490†	6105.4	3.263	mg/L	0.0483	32.63	mg/L	0.483	1.48%
Mg 279.077†	17055.6	12.19	mg/L	0.156	121.9	mg/L	1.56	1.28%
Mn 257.610†	38051.4	1.122	mg/L	0.0113	11.22	mg/L	0.113	1.01%
Mo 202.031†	157.3	0.00548	mg/L	0.000291	0.05482	mg/L	0.002915	5.32%
Na 589.592†	19559.8	1.636	mg/L	0.0242	16.36	mg/L	0.242	1.48%
Na 330.237†	43.6	1.697	mg/L	0.0545	16.97	mg/L	0.545	3.21%
Ni 231.604†	182.0	0.04743	mg/L	0.000239	0.4743	mg/L	0.00239	0.50%
Pb 220.353†	20134.1	2.647	mg/L	0.0056	26.47	mg/L	0.056	0.21%
Sb 206.836†	21.5	0.00686	mg/L	0.001011	0.06864	mg/L	0.010110	14.73%
Se 196.026†	-18.7	-0.01353	mg/L	0.003078	-0.1353	mg/L	0.03078	22.75%
Si 288.158†	514.7	0.2557	mg/L	0.00413	2.557	mg/L	0.0413	1.61%
Sn 189.927†	-7.6	0.03029	mg/L	0.000588	0.3029	mg/L	0.00588	1.94%
Sr 421.552†	720259.5	0.8210	mg/L	0.00593	8.210	mg/L	0.0593	0.72%
Ti 334.903†	25566.4	1.300	mg/L	0.0157	13.00	mg/L	0.157	1.20%
Tl 190.801†	5.6	0.00714	mg/L	0.001191	0.07139	mg/L	0.011908	16.68%
V 292.402†	11510.6	0.09234	mg/L	0.000369	0.9234	mg/L	0.00369	0.40%
Zn 206.200†	2331.1	0.6160	mg/L	0.00613	6.160	mg/L	0.0613	1.00%

Sequence No.: 18
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/15/2012 10:57:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2564876.2	102.3	%	0.50				0.49%
ScR 361.383	326522.0	100.4	%	0.63				0.62%
Ag 328.068†	164001.4	0.9851	mg/L	0.00611	0.9851	mg/L	0.00611	0.62%
Al 308.215†	3520.5	2.050	mg/L	0.0071	2.050	mg/L	0.0071	0.35%
As 188.979†	3452.9	1.981	mg/L	0.0141	1.981	mg/L	0.0141	0.71%
B 249.677†	7162.9	0.9778	mg/L	0.00566	0.9778	mg/L	0.00566	0.58%
Ba 233.527†	4438.4	1.045	mg/L	0.0020	1.045	mg/L	0.0020	0.19%
Be 313.042†	602735.7	0.9531	mg/L	0.00338	0.9531	mg/L	0.00338	0.35%
Ca 317.933†	28426.6	2.134	mg/L	0.0419	2.134	mg/L	0.0419	1.96%
Cd 228.802†	31500.7	1.044	mg/L	0.0093	1.044	mg/L	0.0093	0.89%
Co 228.616†	34149.4	1.048	mg/L	0.0092	1.048	mg/L	0.0092	0.87%
Cr 267.716†	6114.9	1.048	mg/L	0.0032	1.048	mg/L	0.0032	0.31%
Cu 324.752†	249526.6	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Fe 273.955†	2603.3	2.128	mg/L	0.0058	2.128	mg/L	0.0058	0.27%
K 766.490†	37521.6	20.05	mg/L	0.102	20.05	mg/L	0.102	0.51%
Mg 279.077†	2888.2	2.076	mg/L	0.0056	2.076	mg/L	0.0056	0.27%
Mn 257.610†	34241.3	1.011	mg/L	0.0063	1.011	mg/L	0.0063	0.62%
Mo 202.031†	19339.5	1.019	mg/L	0.0082	1.019	mg/L	0.0082	0.81%
Na 589.592†	589094.9	49.27	mg/L	0.074	49.27	mg/L	0.074	0.15%
Na 330.237†	1425.5	52.24	mg/L	0.164	52.24	mg/L	0.164	0.31%
Ni 231.604†	3787.8	0.9876	mg/L	0.00716	0.9876	mg/L	0.00716	0.72%
Pb 220.353†	14997.9	1.966	mg/L	0.0165	1.966	mg/L	0.0165	0.84%
Sb 206.836†	6472.7	2.090	mg/L	0.0179	2.090	mg/L	0.0179	0.86%
Se 196.026†	2711.4	1.946	mg/L	0.0121	1.946	mg/L	0.0121	0.62%
Si 288.158†	4289.5	2.118	mg/L	0.0140	2.118	mg/L	0.0140	0.66%
Sn 189.927†	3721.4	1.015	mg/L	0.0082	1.015	mg/L	0.0082	0.81%
Sr 421.552†	850889.5	0.9700	mg/L	0.00272	0.9700	mg/L	0.00272	0.28%
Ti 334.903†	20198.8	1.036	mg/L	0.0056	1.036	mg/L	0.0056	0.55%
Tl 190.801†	4676.7	1.939	mg/L	0.0178	1.939	mg/L	0.0178	0.92%
V 292.402†	125418.8	1.033	mg/L	0.0069	1.033	mg/L	0.0069	0.67%
Zn 206.200†	3897.4	1.029	mg/L	0.0040	1.029	mg/L	0.0040	0.39%

Sequence No.: 19
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/15/2012 11:02:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2568720.1	102.4	%	0.17				0.16%
ScR 361.383	326887.0	100.5	%	1.30				1.30%
Ag 328.068†	-8.8	-0.00005	mg/L	0.000084	-0.00005	mg/L	0.000084	158.42%
Al 308.215†	3.9	0.00229	mg/L	0.001374	0.00229	mg/L	0.001374	60.02%
As 188.979†	2.5	0.00145	mg/L	0.000324	0.00145	mg/L	0.000324	22.37%
B 249.677†	12.5	0.00171	mg/L	0.000706	0.00171	mg/L	0.000706	41.17%
Ba 233.527†	-0.5	-0.00013	mg/L	0.000361	-0.00013	mg/L	0.000361	285.82%
Be 313.042†	47.3	0.00007	mg/L	0.000024	0.00007	mg/L	0.000024	31.59%
Ca 317.933†	330.3	0.02480	mg/L	0.000793	0.02480	mg/L	0.000793	3.20%
Cd 228.802†	1.2	0.00003	mg/L	0.000066	0.00003	mg/L	0.000066	211.61%
Co 228.616†	15.8	0.00049	mg/L	0.000115	0.00049	mg/L	0.000115	23.65%
Cr 267.716†	-1.4	-0.00025	mg/L	0.000987	-0.00025	mg/L	0.000987	400.69%
Cu 324.752†	3.2	0.00001	mg/L	0.000084	0.00001	mg/L	0.000084	638.65%
Fe 273.955†	11.0	0.00899	mg/L	0.002082	0.00899	mg/L	0.002082	23.15%
K 766.490†	-19.4	-0.01035	mg/L	0.008605	-0.01035	mg/L	0.008605	83.14%
Mg 279.077†	2.6	0.00187	mg/L	0.002342	0.00187	mg/L	0.002342	125.44%
Mn 257.610†	9.5	0.00028	mg/L	0.000086	0.00028	mg/L	0.000086	30.77%
Mo 202.031†	18.2	0.00096	mg/L	0.000184	0.00096	mg/L	0.000184	19.19%
Na 589.592†	62.4	0.00522	mg/L	0.004246	0.00522	mg/L	0.004246	81.33%
Na 330.237†	13.5	0.4977	mg/L	0.28436	0.4977	mg/L	0.28436	57.14%
Ni 231.604†	-0.3	-0.00007	mg/L	0.000564	-0.00007	mg/L	0.000564	841.29%
Pb 220.353†	-1.9	-0.00025	mg/L	0.000470	-0.00025	mg/L	0.000470	189.97%
Sb 206.836†	8.7	0.00281	mg/L	0.002071	0.00281	mg/L	0.002071	73.69%
Se 196.026†	-1.0	-0.00074	mg/L	0.002167	-0.00074	mg/L	0.002167	292.98%
Si 288.158†	-5.7	-0.00279	mg/L	0.000649	-0.00279	mg/L	0.000649	23.29%
Sn 189.927†	-0.4	-0.00011	mg/L	0.000213	-0.00011	mg/L	0.000213	192.49%
Sr 421.552†	222.5	0.00025	mg/L	0.000045	0.00025	mg/L	0.000045	17.80%
Ti 334.903†	16.8	0.00086	mg/L	0.000864	0.00086	mg/L	0.000864	100.42%
Tl 190.801†	-1.2	-0.00048	mg/L	0.001131	-0.00048	mg/L	0.001131	233.60%
V 292.402†	6.1	0.00005	mg/L	0.000036	0.00005	mg/L	0.000036	73.55%
Zn 206.200†	0.2	0.00006	mg/L	0.000505	0.00006	mg/L	0.000505	787.85%

Sequence No.: 20
Sample ID: VS40 H SWC

Autosampler Location: 319
Date Collected: 11/15/2012 11:07:01 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2518258.6	100.4	%	0.92				0.91%
ScR 361.383	323688.4	99.49	%	0.468				0.47%
Ag 328.068†	-173.7	-0.00101	mg/L	0.000210	-0.01011	mg/L	0.002101	20.78%
Al 308.215†	86631.3	51.29	mg/L	0.437	512.9	mg/L	4.37	0.85%
As 188.979†	39.1	0.04510	mg/L	0.001684	0.4510	mg/L	0.01684	3.74%
B 249.677†	97.5	0.01325	mg/L	0.000594	0.1325	mg/L	0.00594	4.48%
Ba 233.527†	2531.3	0.5872	mg/L	0.00603	5.872	mg/L	0.0603	1.03%
Be 313.042†	506.4	0.00076	mg/L	0.000032	0.00761	mg/L	0.000320	4.20%
Ca 317.933†	4060005.6	304.8	mg/L	1.14	3048	mg/L	11.36	0.37%
Cd 228.802†	42.2	0.00077	mg/L	0.000135	0.00772	mg/L	0.001350	17.48%
Co 228.616†	1190.4	0.03307	mg/L	0.000334	0.3307	mg/L	0.00334	1.01%
Cr 267.716†	521.5	0.08751	mg/L	0.001609	0.8751	mg/L	0.01609	1.84%
Cu 324.752†	67381.0	0.2822	mg/L	0.00311	2.822	mg/L	0.0311	1.10%
Fe 273.955†	68850.0	56.46	mg/L	0.353	564.6	mg/L	3.53	0.63%
K 766.490†	5736.4	3.066	mg/L	0.0518	30.66	mg/L	0.518	1.69%
Mg 279.077†	18077.9	12.92	mg/L	0.104	129.2	mg/L	1.04	0.80%
Mn 257.610†	42462.1	1.252	mg/L	0.0086	12.52	mg/L	0.086	0.69%
Mo 202.031†	192.9	0.00687	mg/L	0.000660	0.06867	mg/L	0.006597	9.61%
Na 589.592†	20907.0	1.749	mg/L	0.0147	17.49	mg/L	0.147	0.84%
Na 330.237†	55.0	2.089	mg/L	0.1727	20.89	mg/L	1.727	8.27%
Ni 231.604†	204.6	0.05333	mg/L	0.000985	0.5333	mg/L	0.00985	1.85%
Pb 220.353†	4625.3	0.6157	mg/L	0.00714	6.157	mg/L	0.0714	1.16%
Sb 206.836†	14.5	0.00449	mg/L	0.001500	0.04487	mg/L	0.014998	33.43%
Se 196.026†	-11.3	-0.00818	mg/L	0.003761	-0.08176	mg/L	0.037606	46.00%
Si 288.158†	677.4	0.3361	mg/L	0.00836	3.361	mg/L	0.0836	2.49%
Sn 189.927†	7.8	0.04006	mg/L	0.001124	0.4006	mg/L	0.01124	2.81%
Sr 421.552†	784951.8	0.8948	mg/L	0.00339	8.948	mg/L	0.0339	0.38%
Ti 334.903†	27775.1	1.411	mg/L	0.0106	14.11	mg/L	0.106	0.75%
Tl 190.801†	8.9	0.00911	mg/L	0.001180	0.09114	mg/L	0.011803	12.95%
V 292.402†	13669.5	0.1098	mg/L	0.00153	1.098	mg/L	0.0153	1.40%
Zn 206.200†	2919.9	0.7715	mg/L	0.00784	7.715	mg/L	0.0784	1.02%

Sequence No.: 21
Sample ID: VS40 I SWC

Autosampler Location: 320
Date Collected: 11/15/2012 11:11:21 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 I SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2576234.2	102.7	%	0.44				0.43%
ScR 361.383	322104.5	99.00	%	0.541				0.55%
Ag 328.068†	-143.5	-0.00083	mg/L	0.000109	-0.00830	mg/L	0.001089	13.13%
Al 308.215†	86982.3	51.50	mg/L	0.209	515.0	mg/L	2.09	0.41%
As 188.979†	31.7	0.04411	mg/L	0.002218	0.4411	mg/L	0.02218	5.03%
B 249.677†	94.2	0.01280	mg/L	0.000177	0.1280	mg/L	0.00177	1.39%
Ba 233.527†	2558.3	0.5937	mg/L	0.00293	5.937	mg/L	0.0293	0.49%
Be 313.042†	517.1	0.00078	mg/L	0.000026	0.00777	mg/L	0.000264	3.40%
Ca 317.933†	4030563.0	302.6	mg/L	1.52	3026	mg/L	15.21	0.50%
Cd 228.802†	40.4	0.00075	mg/L	0.000046	0.00749	mg/L	0.000456	6.09%
Co 228.616†	1169.7	0.03224	mg/L	0.000525	0.3224	mg/L	0.00525	1.63%
Cr 267.716†	539.8	0.09060	mg/L	0.000700	0.9060	mg/L	0.00700	0.77%
Cu 324.752†	66611.9	0.2789	mg/L	0.00363	2.789	mg/L	0.0363	1.30%
Fe 273.955†	67577.9	55.42	mg/L	0.166	554.2	mg/L	1.66	0.30%
K 766.490†	5904.1	3.155	mg/L	0.0252	31.55	mg/L	0.252	0.80%
Mg 279.077†	18615.2	13.31	mg/L	0.089	133.1	mg/L	0.89	0.67%
Mn 257.610†	43040.0	1.269	mg/L	0.0055	12.69	mg/L	0.055	0.43%
Mo 202.031†	183.3	0.00639	mg/L	0.000262	0.06387	mg/L	0.002623	4.11%
Na 589.592†	21018.4	1.758	mg/L	0.0049	17.58	mg/L	0.049	0.28%
Na 330.237†	45.9	1.780	mg/L	0.1710	17.80	mg/L	1.710	9.61%
Ni 231.604†	206.6	0.05385	mg/L	0.002469	0.5385	mg/L	0.02469	4.59%
Pb 220.353†	9654.1	1.275	mg/L	0.0157	12.75	mg/L	0.157	1.23%
Sb 206.836†	23.9	0.00750	mg/L	0.002777	0.07500	mg/L	0.027770	37.03%
Se 196.026†	-16.0	-0.01155	mg/L	0.003000	-0.1155	mg/L	0.03000	25.97%
Si 288.158†	561.8	0.2790	mg/L	0.00318	2.790	mg/L	0.0318	1.14%
Sn 189.927†	5.6	0.03920	mg/L	0.001716	0.3920	mg/L	0.01716	4.38%
Sr 421.552†	779251.5	0.8883	mg/L	0.00456	8.883	mg/L	0.0456	0.51%
Ti 334.903†	29861.6	1.518	mg/L	0.0073	15.18	mg/L	0.073	0.48%
Tl 190.801†	3.7	0.00688	mg/L	0.001593	0.06877	mg/L	0.015933	23.17%
V 292.402†	13493.0	0.1084	mg/L	0.00120	1.084	mg/L	0.0120	1.11%
Zn 206.200†	2933.5	0.7751	mg/L	0.00561	7.751	mg/L	0.0561	0.72%

Sequence No.: 22
Sample ID: VS40 J SWC

Autosampler Location: 321
Date Collected: 11/15/2012 11:15:38 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2571791.7	102.6	%	0.71				0.69%
ScR 361.383	322454.2	99.11	%	0.707				0.71%
Ag 328.068†	-173.0	-0.00101	mg/L	0.000180	-0.01007	mg/L	0.001799	17.87%
Al 308.215†	85746.1	50.77	mg/L	0.134	507.7	mg/L	1.34	0.26%
As 188.979†	33.8	0.04368	mg/L	0.004496	0.4368	mg/L	0.04496	10.29%
B 249.677†	82.4	0.01120	mg/L	0.000554	0.1120	mg/L	0.00554	4.94%
Ba 233.527†	2293.0	0.5313	mg/L	0.00641	5.313	mg/L	0.0641	1.21%
Be 313.042†	497.9	0.00075	mg/L	0.000002	0.00748	mg/L	0.000023	0.31%
Ca 317.933†	3601167.0	270.4	mg/L	2.49	2704	mg/L	24.94	0.92%
Cd 228.802†	41.7	0.00079	mg/L	0.000043	0.00792	mg/L	0.000426	5.38%
Co 228.616†	1162.8	0.03228	mg/L	0.000478	0.3228	mg/L	0.00478	1.48%
Cr 267.716†	480.5	0.08065	mg/L	0.000694	0.8065	mg/L	0.00694	0.86%
Cu 324.752†	61794.6	0.2589	mg/L	0.00201	2.589	mg/L	0.0201	0.78%
Fe 273.955†	66718.0	54.72	mg/L	0.162	547.2	mg/L	1.62	0.30%
K 766.490†	5373.2	2.872	mg/L	0.0242	28.72	mg/L	0.242	0.84%
Mg 279.077†	19670.0	14.06	mg/L	0.047	140.6	mg/L	0.47	0.33%
Mn 257.610†	43185.9	1.273	mg/L	0.0016	12.73	mg/L	0.016	0.13%
Mo 202.031†	173.8	0.00623	mg/L	0.000616	0.06234	mg/L	0.006157	9.88%
Na 589.592†	19426.7	1.625	mg/L	0.0059	16.25	mg/L	0.059	0.36%
Na 330.237†	48.4	1.868	mg/L	0.1291	18.68	mg/L	1.291	6.91%
Ni 231.604†	207.6	0.05411	mg/L	0.001584	0.5411	mg/L	0.01584	2.93%
Pb 220.353†	5146.3	0.6840	mg/L	0.00768	6.840	mg/L	0.0768	1.12%
Sb 206.836†	14.4	0.00452	mg/L	0.002525	0.04519	mg/L	0.025254	55.88%
Se 196.026†	-12.5	-0.00906	mg/L	0.002139	-0.09060	mg/L	0.021391	23.61%
Si 288.158†	590.5	0.2933	mg/L	0.00436	2.933	mg/L	0.0436	1.49%
Sn 189.927†	-4.0	0.03259	mg/L	0.001871	0.3259	mg/L	0.01871	5.74%
Sr 421.552†	696487.6	0.7939	mg/L	0.00758	7.939	mg/L	0.0758	0.96%
Ti 334.903†	27497.3	1.399	mg/L	0.0022	13.99	mg/L	0.022	0.16%
Tl 190.801†	9.1	0.00903	mg/L	0.002131	0.09027	mg/L	0.021307	23.60%
V 292.402†	13463.6	0.1082	mg/L	0.00082	1.082	mg/L	0.0082	0.76%
Zn 206.200†	2644.1	0.6986	mg/L	0.00692	6.986	mg/L	0.0692	0.99%

Sequence No.: 23
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 11/15/2012 11:19:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2571613.0	102.5	%	0.63				0.61%
ScR 361.383	324348.9	99.69	%	0.934				0.94%
Ag 328.068†	165212.6	0.9923	mg/L	0.00674	0.9923	mg/L	0.00674	0.68%
Al 308.215†	3524.8	2.052	mg/L	0.0183	2.052	mg/L	0.0183	0.89%
As 188.979†	3470.3	1.991	mg/L	0.0249	1.991	mg/L	0.0249	1.25%
B 249.677†	7191.9	0.9818	mg/L	0.01110	0.9818	mg/L	0.01110	1.13%
Ba 233.527†	4441.5	1.046	mg/L	0.0091	1.046	mg/L	0.0091	0.87%
Be 313.042†	608188.3	0.9617	mg/L	0.00912	0.9617	mg/L	0.00912	0.95%
Ca 317.933†	27937.1	2.097	mg/L	0.0247	2.097	mg/L	0.0247	1.18%
Cd 228.802†	31613.8	1.048	mg/L	0.0053	1.048	mg/L	0.0053	0.51%
Co 228.616†	33422.2	1.026	mg/L	0.0075	1.026	mg/L	0.0075	0.73%
Cr 267.716†	6127.7	1.050	mg/L	0.0120	1.050	mg/L	0.0120	1.15%
Cu 324.752†	250788.6	1.042	mg/L	0.0066	1.042	mg/L	0.0066	0.64%
Fe 273.955†	2614.5	2.137	mg/L	0.0320	2.137	mg/L	0.0320	1.50%
K 766.490†	37650.9	20.12	mg/L	0.121	20.12	mg/L	0.121	0.60%
Mg 279.077†	2896.8	2.082	mg/L	0.0213	2.082	mg/L	0.0213	1.02%
Mn 257.610†	34445.7	1.017	mg/L	0.0098	1.017	mg/L	0.0098	0.96%
Mo 202.031†	18957.7	0.9990	mg/L	0.00685	0.9990	mg/L	0.00685	0.69%
Na 589.592†	593914.3	49.67	mg/L	0.391	49.67	mg/L	0.391	0.79%
Na 330.237†	1431.5	52.46	mg/L	0.516	52.46	mg/L	0.516	0.98%
Ni 231.604†	3801.5	0.9912	mg/L	0.00866	0.9912	mg/L	0.00866	0.87%
Pb 220.353†	14677.8	1.924	mg/L	0.0128	1.924	mg/L	0.0128	0.67%
Sb 206.836†	6520.2	2.106	mg/L	0.0253	2.106	mg/L	0.0253	1.20%
Se 196.026†	2721.2	1.953	mg/L	0.0306	1.953	mg/L	0.0306	1.56%
Si 288.158†	4305.3	2.125	mg/L	0.0207	2.125	mg/L	0.0207	0.97%
Sn 189.927†	3748.6	1.023	mg/L	0.0135	1.023	mg/L	0.0135	1.32%
Sr 421.552†	857032.3	0.9770	mg/L	0.00744	0.9770	mg/L	0.00744	0.76%
Ti 334.903†	20324.8	1.042	mg/L	0.0096	1.042	mg/L	0.0096	0.92%
Tl 190.801†	4687.0	1.943	mg/L	0.0256	1.943	mg/L	0.0256	1.32%
V 292.402†	126407.4	1.041	mg/L	0.0078	1.041	mg/L	0.0078	0.75%
Zn 206.200†	3899.6	1.030	mg/L	0.0094	1.030	mg/L	0.0094	0.91%

Sequence No.: 24
Sample ID: CB 4
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 11:25:02 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2564028.2	102.2	%	0.37				0.36%
ScR 361.383	328203.4	100.9	%	1.13				1.12%
Ag 328.068†	19.2	0.00012	mg/L	0.000166	0.00012	mg/L	0.000166	143.99%
Al 308.215†	0.2	0.00010	mg/L	0.002795	0.00010	mg/L	0.002795	>999.9%
As 188.979†	1.5	0.00087	mg/L	0.001211	0.00087	mg/L	0.001211	139.03%
B 249.677†	10.0	0.00137	mg/L	0.000263	0.00137	mg/L	0.000263	19.16%
Ba 233.527†	-2.3	-0.00054	mg/L	0.000534	-0.00054	mg/L	0.000534	98.30%
Be 313.042†	34.3	0.00005	mg/L	0.000039	0.00005	mg/L	0.000039	71.99%
Ca 317.933†	75.8	0.00569	mg/L	0.004686	0.00569	mg/L	0.004686	82.35%
Cd 228.802†	-2.6	-0.00009	mg/L	0.000054	-0.00009	mg/L	0.000054	57.28%
Co 228.616†	13.7	0.00042	mg/L	0.000088	0.00042	mg/L	0.000088	20.92%
Cr 267.716†	1.5	0.00026	mg/L	0.001063	0.00026	mg/L	0.001063	413.94%
Cu 324.752†	-38.0	-0.00016	mg/L	0.000034	-0.00016	mg/L	0.000034	21.27%
Fe 273.955†	3.2	0.00264	mg/L	0.001543	0.00264	mg/L	0.001543	58.52%
K 766.490†	6.9	0.00370	mg/L	0.002988	0.00370	mg/L	0.002988	80.69%
Mg 279.077†	-1.9	-0.00135	mg/L	0.002351	-0.00135	mg/L	0.002351	174.64%
Mn 257.610†	0.4	0.00001	mg/L	0.000052	0.00001	mg/L	0.000052	488.45%
Mo 202.031†	19.9	0.00105	mg/L	0.000218	0.00105	mg/L	0.000218	20.82%
Na 589.592†	42.3	0.00353	mg/L	0.003014	0.00353	mg/L	0.003014	85.27%
Na 330.237†	4.1	0.1495	mg/L	0.07843	0.1495	mg/L	0.07843	52.44%
Ni 231.604†	-1.8	-0.00047	mg/L	0.000063	-0.00047	mg/L	0.000063	13.62%
Pb 220.353†	2.7	0.00035	mg/L	0.000467	0.00035	mg/L	0.000467	133.23%
Sb 206.836†	15.0	0.00484	mg/L	0.000786	0.00484	mg/L	0.000786	16.23%
Se 196.026†	0.3	0.00024	mg/L	0.001374	0.00024	mg/L	0.001374	574.44%
Si 288.158†	-0.8	-0.00042	mg/L	0.003954	-0.00042	mg/L	0.003954	932.96%
Sn 189.927†	5.3	0.00146	mg/L	0.000304	0.00146	mg/L	0.000304	20.84%
Sr 421.552†	121.3	0.00014	mg/L	0.000019	0.00014	mg/L	0.000019	13.54%
Ti 334.903†	20.5	0.00105	mg/L	0.000613	0.00105	mg/L	0.000613	58.28%
Tl 190.801†	-4.6	-0.00194	mg/L	0.002127	-0.00194	mg/L	0.002127	109.84%
V 292.402†	15.5	0.00013	mg/L	0.000149	0.00013	mg/L	0.000149	116.14%
Zn 206.200†	1.8	0.00048	mg/L	0.000580	0.00048	mg/L	0.000580	121.97%

Sequence No.: 25
Sample ID: VR30 MB1 SWC

Autosampler Location: 322
Date Collected: 11/15/2012 11:29:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2599167.6	103.6	%	0.14				0.13%
ScR 361.383	335819.8	103.2	%	1.05				1.02%
Ag 328.068†	-40.8	-0.00025	mg/L	0.000148	-0.00049	mg/L	0.000295	60.23%
Al 308.215†	-7.7	-0.00457	mg/L	0.003986	-0.00913	mg/L	0.007971	87.28%
As 188.979†	1.5	0.00086	mg/L	0.002224	0.00173	mg/L	0.004449	257.53%
B 249.677†	9.4	0.00128	mg/L	0.000825	0.00257	mg/L	0.001649	64.23%
Ba 233.527†	0.9	0.00022	mg/L	0.000596	0.00043	mg/L	0.001191	275.33%
Be 313.042†	-32.0	-0.00005	mg/L	0.000015	-0.00010	mg/L	0.000031	30.47%
Ca 317.933†	87.1	0.00654	mg/L	0.000467	0.01307	mg/L	0.000935	7.15%
Cd 228.802†	-4.9	-0.00017	mg/L	0.000030	-0.00034	mg/L	0.000060	17.60%
Co 228.616†	9.3	0.00028	mg/L	0.000025	0.00057	mg/L	0.000051	8.95%
Cr 267.716†	1.7	0.00029	mg/L	0.000198	0.00058	mg/L	0.000395	67.78%
Cu 324.752†	-45.8	-0.00019	mg/L	0.000133	-0.00038	mg/L	0.000266	69.89%
Fe 273.955†	10.2	0.00838	mg/L	0.000547	0.01677	mg/L	0.001093	6.52%
K 766.490†	-27.5	-0.01472	mg/L	0.001665	-0.02944	mg/L	0.003330	11.31%
Mg 279.077†	0.9	0.00063	mg/L	0.002623	0.00126	mg/L	0.005247	415.82%
Mn 257.610†	12.7	0.00037	mg/L	0.000097	0.00075	mg/L	0.000194	25.93%
Mo 202.031†	1.0	0.00005	mg/L	0.000292	0.00010	mg/L	0.000584	563.08%
Na 589.592†	61.5	0.00515	mg/L	0.004494	0.01030	mg/L	0.008989	87.31%
Na 330.237†	11.1	0.3997	mg/L	0.35689	0.7994	mg/L	0.71378	89.29%
Ni 231.604†	2.5	0.00065	mg/L	0.001536	0.00130	mg/L	0.003072	236.63%
Pb 220.353†	-0.7	-0.00009	mg/L	0.001347	-0.00018	mg/L	0.002695	>999.9%
Sb 206.836†	1.4	0.00046	mg/L	0.000687	0.00093	mg/L	0.001373	148.14%
Se 196.026†	1.4	0.00100	mg/L	0.002036	0.00200	mg/L	0.004072	203.28%
Si 288.158†	-0.6	-0.00028	mg/L	0.003358	-0.00057	mg/L	0.006717	>999.9%
Sn 189.927†	-0.5	-0.00012	mg/L	0.000472	-0.00024	mg/L	0.000944	387.75%
Sr 421.552†	53.3	0.00006	mg/L	0.000007	0.00012	mg/L	0.000013	11.04%
Ti 334.903†	9.2	0.00047	mg/L	0.001421	0.00094	mg/L	0.002843	301.07%
Tl 190.801†	-1.7	-0.00071	mg/L	0.001561	-0.00142	mg/L	0.003121	219.73%
V 292.402†	12.4	0.00010	mg/L	0.000148	0.00020	mg/L	0.000295	144.26%
Zn 206.200†	101.3	0.02677	mg/L	0.000265	0.05355	mg/L	0.000530	0.99%

Sequence No.: 26
Sample ID: VR30 B SWC

Dilution: 2.000000X

Del

Autosampler Location: 323
Date Collected: 11/15/2012 11:33:36 AM
Data Type: Original

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2605537.2	103.9	%	0.03				0.03%
ScR 361.383	335963.5	103.3	%	0.88				0.86%
Ag 328.068†	-505.6	-0.00291	mg/L	0.000175	-0.00581	mg/L	0.000349	6.01%
Al 308.215†	380896.8	225.5	mg/L	1.00	451.0	mg/L	2.01	0.45%
As 188.979†	107.3	0.1727	mg/L	0.00048	0.3455	mg/L	0.00096	0.28%
B 249.677†	74.3	0.00985	mg/L	0.000808	0.01971	mg/L	0.001617	8.20%
Ba 233.527†	44913.3	10.52	mg/L	0.073	21.04	mg/L	0.147	0.70%
Be 313.042†	7015.2	0.01096	mg/L	0.000088	0.02192	mg/L	0.000176	0.80%
Ca 317.933†	965238.3	72.46	mg/L	0.625	144.9	mg/L	1.25	0.86%
Cd 228.802†	745.7	0.02098	mg/L	0.000201	0.04196	mg/L	0.000402	0.96%
Co 228.616†	4936.3	0.1380	mg/L	0.00109	0.2760	mg/L	0.00217	0.79%
Cr 267.716†	1523.9	0.2684	mg/L	0.00057	0.5367	mg/L	0.00114	0.21%
Cu 324.752†	41236.6	0.1875	mg/L	0.00196	0.3749	mg/L	0.00393	1.05%
Fe 273.955†	479889.0	393.6	mg/L	3.18	787.1	mg/L	6.36	0.81%
K 766.490†	32663.4	17.46	mg/L	0.055	34.91	mg/L	0.110	0.32%
Mg 279.077†	88101.9	62.90	mg/L	0.429	125.8	mg/L	0.86	0.68%
Mn 257.610†	761978.3	22.48	mg/L	0.154	44.96	mg/L	0.308	0.69%
Mo 202.031†	182.0	0.00879	mg/L	0.000594	0.01759	mg/L	0.001188	6.75%
Na 589.592†	13041.1	1.091	mg/L	0.0088	2.181	mg/L	0.0176	0.80%
Na 330.237†	4.2	0.4314	mg/L	0.37031	0.8628	mg/L	0.74062	85.84%
Ni 231.604†	662.2	0.1726	mg/L	0.00386	0.3453	mg/L	0.00772	2.23%
Pb 220.353†	5328.1	0.7361	mg/L	0.00529	1.472	mg/L	0.0106	0.72%
Sb 206.836†	57.6	0.01828	mg/L	0.002293	0.03655	mg/L	0.004587	12.55%
Se 196.026†	26.5	0.01870	mg/L	0.007613	0.03740	mg/L	0.015226	40.71%
Si 288.158†	6551.8	3.243	mg/L	0.0146	6.486	mg/L	0.0291	0.45%
Sn 189.927†	-58.8	-0.00645	mg/L	0.002437	-0.01290	mg/L	0.004874	37.80%
Sr 421.552†	495793.0	0.5652	mg/L	0.00198	1.130	mg/L	0.0040	0.35%
Ti 334.903†	79253.5	4.065	mg/L	0.0162	8.129	mg/L	0.0324	0.40%
Tl 190.801†	-97.8	-0.00111	mg/L	0.003096	-0.00222	mg/L	0.006191	279.17%
V 292.402†	54622.9	0.4362	mg/L	0.00254	0.8724	mg/L	0.00507	0.58%
Zn 206.200†	7452.3	1.969	mg/L	0.0151	3.938	mg/L	0.0302	0.77%

Sequence No.: 27
Sample ID: VR30 C SWC

Autosampler Location: 324
Date Collected: 11/15/2012 11:37:39 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 C SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2592456.5	103.4	%	0.55				0.54%
ScR 361.383	339510.9	104.4	%	1.04				1.00%
Ag 328.068†	-425.9	-0.00244	mg/L	0.000087	-0.00488	mg/L	0.000174	3.56%
Al 308.215†	393885.1	233.2	mg/L	2.94	466.4	mg/L	5.87	1.26%
As 188.979†	-107.3	0.1144	mg/L	0.00323	0.2288	mg/L	0.00647	2.83%
B 249.677†	138.0	0.01862	mg/L	0.000903	0.03724	mg/L	0.001807	4.85%
Ba 233.527†	18457.4	4.310	mg/L	0.0357	8.620	mg/L	0.0714	0.83%
Be 313.042†	5166.1	0.00801	mg/L	0.000048	0.01603	mg/L	0.000095	0.59%
Ca 317.933†	694021.5	52.10	mg/L	0.649	104.2	mg/L	1.30	1.25%
Cd 228.802†	414.2	0.01217	mg/L	0.000182	0.02434	mg/L	0.000364	1.49%
Co 228.616†	3732.4	0.09925	mg/L	0.000739	0.1985	mg/L	0.00148	0.74%
Cr 267.716†	1487.7	0.2578	mg/L	0.00169	0.5156	mg/L	0.00337	0.65%
Cu 324.752†	46993.7	0.2042	mg/L	0.00127	0.4084	mg/L	0.00255	0.62%
Fe 273.955†	293232.9	240.5	mg/L	3.16	481.0	mg/L	6.33	1.32%
K 766.490†	26037.3	13.92	mg/L	0.180	27.83	mg/L	0.359	1.29%
Mg 279.077†	81997.3	58.61	mg/L	0.793	117.2	mg/L	1.59	1.35%
Mn 257.610†	353552.5	10.43	mg/L	0.135	20.86	mg/L	0.269	1.29%
Mo 202.031†	95.0	0.00443	mg/L	0.000207	0.00886	mg/L	0.000415	4.68%
Na 589.592†	18853.7	1.577	mg/L	0.0181	3.154	mg/L	0.0362	1.15%
Na 330.237†	0.2	1.016	mg/L	0.0677	2.032	mg/L	0.1354	6.66%
Ni 231.604†	812.3	0.2118	mg/L	0.00238	0.4235	mg/L	0.00477	1.13%
Pb 220.353†	4047.1	0.5764	mg/L	0.00520	1.153	mg/L	0.0104	0.90%
Sb 206.836†	32.9	0.01119	mg/L	0.001175	0.02239	mg/L	0.002349	10.49%
Se 196.026†	26.7	0.01885	mg/L	0.004613	0.03770	mg/L	0.009226	24.47%
Si 288.158†	7078.4	3.502	mg/L	0.0150	7.005	mg/L	0.0301	0.43%
Sn 189.927†	-42.6	-0.00424	mg/L	0.002101	-0.00848	mg/L	0.004201	49.53%
Sr 421.552†	513657.8	0.5855	mg/L	0.00753	1.171	mg/L	0.0151	1.29%
Ti 334.903†	121465.6	6.233	mg/L	0.0757	12.47	mg/L	0.151	1.21%
Tl 190.801†	-56.8	-0.00009	mg/L	0.001491	-0.00019	mg/L	0.002983	>999.9%
V 292.402†	50152.4	0.4018	mg/L	0.00157	0.8037	mg/L	0.00314	0.39%
Zn 206.200†	4698.2	1.241	mg/L	0.0096	2.483	mg/L	0.0193	0.78%

Sequence No.: 28
Sample ID: VR30 D SWC

Dilution: 2.000000X

Autosampler Location: 325
Date Collected: 11/15/2012 11:41:41 AM
Data Type: Original

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629496.9	104.9	%	0.36				0.34%
ScR 361.383	340969.8	104.8	%	0.78				0.75%
Ag 328.068†	-447.3	-0.00257	mg/L	0.000054	-0.00515	mg/L	0.000108	2.09%
Al 308.215†	464884.1	275.2	mg/L	3.66	550.5	mg/L	7.33	1.33%
As 188.979†	-163.5	0.1107	mg/L	0.00413	0.2215	mg/L	0.00826	3.73%
B 249.677†	155.0	0.02097	mg/L	0.000263	0.04193	mg/L	0.000525	1.25%
Ba 233.527†	15894.3	3.707	mg/L	0.0438	7.414	mg/L	0.0875	1.18%
Be 313.042†	5225.9	0.00810	mg/L	0.000092	0.01620	mg/L	0.000184	1.14%
Ca 317.933†	743732.1	55.83	mg/L	0.773	111.7	mg/L	1.55	1.38%
Cd 228.802†	423.9	0.01278	mg/L	0.000366	0.02556	mg/L	0.000732	2.86%
Co 228.616†	3513.9	0.09073	mg/L	0.000890	0.1815	mg/L	0.00178	0.98%
Cr 267.716†	1557.9	0.2696	mg/L	0.00276	0.5393	mg/L	0.00552	1.02%
Cu 324.752†	52401.1	0.2262	mg/L	0.00101	0.4524	mg/L	0.00203	0.45%
Fe 273.955†	286058.6	234.6	mg/L	3.59	469.2	mg/L	7.17	1.53%
K 766.490†	24358.6	13.02	mg/L	0.136	26.04	mg/L	0.271	1.04%
Mg 279.077†	84636.1	60.50	mg/L	0.874	121.0	mg/L	1.75	1.44%
Mn 257.610†	274061.0	8.085	mg/L	0.1180	16.17	mg/L	0.236	1.46%
Mo 202.031†	90.7	0.00416	mg/L	0.000561	0.00833	mg/L	0.001123	13.48%
Na 589.592†	22981.4	1.922	mg/L	0.0294	3.844	mg/L	0.0588	1.53%
Na 330.237†	0.1	1.244	mg/L	0.1244	2.487	mg/L	0.2488	10.00%
Ni 231.604†	856.3	0.2232	mg/L	0.00348	0.4464	mg/L	0.00695	1.56%
Pb 220.353†	4679.7	0.6696	mg/L	0.00318	1.339	mg/L	0.0064	0.47%
Sb 206.836†	20.3	0.00728	mg/L	0.000879	0.01456	mg/L	0.001758	12.07%
Se 196.026†	33.4	0.02371	mg/L	0.006893	0.04741	mg/L	0.013787	29.08%
Si 288.158†	3857.0	1.912	mg/L	0.0273	3.824	mg/L	0.0547	1.43%
Sn 189.927†	-52.4	-0.00632	mg/L	0.001595	-0.01264	mg/L	0.003190	25.25%
Sr 421.552†	582491.0	0.6640	mg/L	0.00959	1.328	mg/L	0.0192	1.44%
Ti 334.903†	140802.3	7.225	mg/L	0.1028	14.45	mg/L	0.206	1.42%
Tl 190.801†	-50.6	0.00198	mg/L	0.000955	0.00395	mg/L	0.001909	48.29%
V 292.402†	47545.5	0.3798	mg/L	0.00137	0.7596	mg/L	0.00275	0.36%
Zn 206.200†	4644.9	1.227	mg/L	0.0137	2.454	mg/L	0.0274	1.11%

Sequence No.: 29
Sample ID: VR30 A-L SWC

Autosampler Location: 326
Date Collected: 11/15/2012 11:45:43 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VR30 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622888.5	104.6	%	0.59				0.57%
ScR 361.383	338611.2	104.1	%	0.08				0.08%
Ag 328.068†	-96.0	-0.00055	mg/L	0.000262	-0.00553	mg/L	0.002617	47.28%
Al 308.215†	65749.6	38.93	mg/L	0.113	389.3	mg/L	1.13	0.29%
As 188.979†	-29.1	0.02297	mg/L	0.001428	0.2297	mg/L	0.01428	6.21%
B 249.677†	40.1	0.00543	mg/L	0.001145	0.05431	mg/L	0.011445	21.07%
Ba 233.527†	5183.4	1.215	mg/L	0.0064	12.15	mg/L	0.064	0.53%
Be 313.042†	840.2	0.00130	mg/L	0.000006	0.01296	mg/L	0.000063	0.49%
Ca 317.933†	263053.0	19.75	mg/L	0.085	197.5	mg/L	0.85	0.43%
Cd 228.802†	189.5	0.00612	mg/L	0.000061	0.06116	mg/L	0.000613	1.00%
Co 228.616†	831.2	0.02217	mg/L	0.000200	0.2217	mg/L	0.00200	0.90%
Cr 267.716†	574.8	0.09821	mg/L	0.001610	0.9821	mg/L	0.01610	1.64%
Cu 324.752†	11445.0	0.04900	mg/L	0.000454	0.4900	mg/L	0.00454	0.93%
Fe 273.955†	50999.7	41.83	mg/L	0.023	418.3	mg/L	0.23	0.05%
K 766.490†	5183.8	2.770	mg/L	0.0111	27.70	mg/L	0.111	0.40%
Mg 279.077†	22144.4	15.84	mg/L	0.066	158.4	mg/L	0.66	0.41%
Mn 257.610†	144379.8	4.259	mg/L	0.0057	42.59	mg/L	0.057	0.13%
Mo 202.031†	44.5	0.00213	mg/L	0.000123	0.02128	mg/L	0.001227	5.77%
Na 589.592†	3227.5	0.2700	mg/L	0.00304	2.700	mg/L	0.0304	1.13%
Na 330.237†	-2.9	0.1185	mg/L	0.06573	1.185	mg/L	0.6573	55.46%
Ni 231.604†	231.9	0.06046	mg/L	0.000592	0.6046	mg/L	0.00592	0.98%
Pb 220.353†	1930.4	0.2606	mg/L	0.00176	2.606	mg/L	0.0176	0.68%
Sb 206.836†	9.4	0.00246	mg/L	0.002551	0.02460	mg/L	0.025511	103.69%
Se 196.026†	6.1	0.00433	mg/L	0.003821	0.04333	mg/L	0.038211	88.19%
Si 288.158†	1732.3	0.8574	mg/L	0.01491	8.574	mg/L	0.1491	1.74%
Sn 189.927†	-29.0	-0.00525	mg/L	0.000928	-0.05254	mg/L	0.009282	17.67%
Sr 421.552†	165817.6	0.1890	mg/L	0.00058	1.890	mg/L	0.0058	0.30%
Ti 334.903†	27725.7	1.422	mg/L	0.0037	14.22	mg/L	0.037	0.26%
Tl 190.801†	-6.2	0.00144	mg/L	0.000661	0.01439	mg/L	0.006615	45.96%
V 292.402†	9663.5	0.07802	mg/L	0.000606	0.7802	mg/L	0.00606	0.78%
Zn 206.200†	1155.2	0.3052	mg/L	0.00257	3.052	mg/L	0.0257	0.84%

Sequence No.: 30
Sample ID: VR30 A SWC

Autosampler Location: 327
Date Collected: 11/15/2012 11:49:44 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2608448.4	104.0	%	0.44				0.42%
ScR 361.383	332092.0	102.1	%	1.95				1.91%
Ag 328.068†	-332.8	-0.00189	mg/L	0.000123	-0.00378	mg/L	0.000246	6.52%
Al 308.215†	331246.8	196.1	mg/L	1.87	392.2	mg/L	3.74	0.95%
As 188.979†	-140.4	0.1165	mg/L	0.00181	0.2330	mg/L	0.00362	1.55%
B 249.677†	182.3	0.02467	mg/L	0.001143	0.04934	mg/L	0.002286	4.63%
Ba 233.527†	25625.1	6.005	mg/L	0.1354	12.01	mg/L	0.271	2.25%
Be 313.042†	4198.1	0.00648	mg/L	0.000145	0.01296	mg/L	0.000290	2.23%
Ca 317.933†	1301418.1	97.70	mg/L	1.119	195.4	mg/L	2.24	1.15%
Cd 228.802†	945.3	0.03053	mg/L	0.000471	0.06106	mg/L	0.000942	1.54%
Co 228.616†	3898.8	0.1031	mg/L	0.00201	0.2061	mg/L	0.00402	1.95%
Cr 267.716†	2810.9	0.4801	mg/L	0.00944	0.9603	mg/L	0.01888	1.97%
Cu 324.752†	58130.7	0.2486	mg/L	0.00265	0.4972	mg/L	0.00529	1.06%
Fe 273.955†	250250.6	205.2	mg/L	2.81	410.5	mg/L	5.62	1.37%
K 766.490†	26562.9	14.20	mg/L	0.118	28.39	mg/L	0.236	0.83%
Mg 279.077†	110384.9	78.96	mg/L	0.947	157.9	mg/L	1.89	1.20%
Mn 257.610†	710510.6	20.96	mg/L	0.264	41.92	mg/L	0.527	1.26%
Mo 202.031†	134.0	0.00598	mg/L	0.000636	0.01196	mg/L	0.001272	10.63%
Na 589.592†	16666.5	1.394	mg/L	0.0104	2.788	mg/L	0.0209	0.75%
Na 330.237†	-11.7	0.6871	mg/L	0.36186	1.374	mg/L	0.7237	52.67%
Ni 231.604†	1146.2	0.2988	mg/L	0.00878	0.5975	mg/L	0.01755	2.94%
Pb 220.353†	9140.9	1.237	mg/L	0.0199	2.473	mg/L	0.0398	1.61%
Sb 206.836†	33.7	0.00840	mg/L	0.001945	0.01680	mg/L	0.003891	23.16%
Se 196.026†	31.0	0.02195	mg/L	0.004275	0.04390	mg/L	0.008551	19.48%
Si 288.158†	9147.5	4.527	mg/L	0.0743	9.053	mg/L	0.1487	1.64%
Sn 189.927†	-53.4	-0.00141	mg/L	0.002032	-0.00283	mg/L	0.004064	143.81%
Sr 421.552†	831009.7	0.9473	mg/L	0.00820	1.895	mg/L	0.0164	0.87%
Ti 334.903†	137685.2	7.063	mg/L	0.0710	14.13	mg/L	0.142	1.01%
Tl 190.801†	-38.0	0.00395	mg/L	0.002952	0.00790	mg/L	0.005904	74.73%
V 292.402†	46662.5	0.3766	mg/L	0.00368	0.7532	mg/L	0.00735	0.98%
Zn 206.200†	5664.2	1.497	mg/L	0.0325	2.993	mg/L	0.0649	2.17%

Sequence No.: 31
Sample ID: VR30 ADUP SWC

Autosampler Location: 328
Date Collected: 11/15/2012 11:53:48 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2610927.2	104.1	%	0.28				0.27%
ScR 361.383	333670.2	102.6	%	0.09				0.09%
Ag 328.068†	-296.3	-0.00168	mg/L	0.000166	-0.00336	mg/L	0.000331	9.84%
Al 308.215†	299620.7	177.4	mg/L	1.16	354.8	mg/L	2.32	0.65%
As 188.979†	-149.0	0.1066	mg/L	0.00607	0.2133	mg/L	0.01214	5.69%
B 249.677†	164.8	0.02230	mg/L	0.000416	0.04460	mg/L	0.000832	1.87%
Ba 233.527†	23589.0	5.527	mg/L	0.0205	11.05	mg/L	0.041	0.37%
Be 313.042†	3693.1	0.00569	mg/L	0.000028	0.01138	mg/L	0.000056	0.49%
Ca 317.933†	1219617.2	91.56	mg/L	0.770	183.1	mg/L	1.54	0.84%
Cd 228.802†	912.3	0.02956	mg/L	0.000157	0.05912	mg/L	0.000314	0.53%
Co 228.616†	3563.1	0.09334	mg/L	0.000195	0.1867	mg/L	0.00039	0.21%
Cr 267.716†	2492.0	0.4263	mg/L	0.00327	0.8526	mg/L	0.00653	0.77%
Cu 324.752†	50362.7	0.2158	mg/L	0.00056	0.4316	mg/L	0.00113	0.26%
Fe 273.955†	232950.5	191.0	mg/L	1.52	382.1	mg/L	3.04	0.80%
K 766.490†	24794.0	13.25	mg/L	0.100	26.50	mg/L	0.201	0.76%
Mg 279.077†	91868.1	65.71	mg/L	0.487	131.4	mg/L	0.97	0.74%
Mn 257.610†	651458.5	19.22	mg/L	0.150	38.44	mg/L	0.301	0.78%
Mo 202.031†	139.0	0.00631	mg/L	0.000154	0.01262	mg/L	0.000307	2.44%
Na 589.592†	14646.4	1.225	mg/L	0.0076	2.450	mg/L	0.0152	0.62%
Na 330.237†	-10.7	0.6978	mg/L	0.23299	1.396	mg/L	0.4660	33.39%
Ni 231.604†	1011.5	0.2637	mg/L	0.00223	0.5273	mg/L	0.00446	0.84%
Pb 220.353†	9347.2	1.260	mg/L	0.0022	2.520	mg/L	0.0045	0.18%
Sb 206.836†	47.1	0.01325	mg/L	0.001411	0.02650	mg/L	0.002821	10.65%
Se 196.026†	27.1	0.01925	mg/L	0.001657	0.03850	mg/L	0.003313	8.61%
Si 288.158†	9781.1	4.838	mg/L	0.0344	9.676	mg/L	0.0688	0.71%
Sn 189.927†	-54.5	-0.00249	mg/L	0.001888	-0.00498	mg/L	0.003776	75.85%
Sr 421.552†	776403.0	0.8850	mg/L	0.00595	1.770	mg/L	0.0119	0.67%
Ti 334.903†	134018.9	6.875	mg/L	0.0536	13.75	mg/L	0.107	0.78%
Tl 190.801†	-26.6	0.00744	mg/L	0.002419	0.01488	mg/L	0.004839	32.51%
V 292.402†	41223.9	0.3321	mg/L	0.00158	0.6642	mg/L	0.00316	0.48%
Zn 206.200†	5445.8	1.439	mg/L	0.0054	2.878	mg/L	0.0108	0.38%

Sequence No.: 32
Sample ID: VR30 ASPK SWC

Autosampler Location: 329
Date Collected: 11/15/2012 11:57:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2619636.9	104.5	%	0.57				0.55%
ScR 361.383	337542.8	103.7	%	0.14				0.14%
Ag 328.068†	80516.1	0.4837	mg/L	0.00207	0.9674	mg/L	0.00414	0.43%
Al 308.215†	309779.0	183.4	mg/L	1.60	366.8	mg/L	3.20	0.87%
As 188.979†	3345.6	2.079	mg/L	0.0063	4.158	mg/L	0.0126	0.30%
B 249.677†	184.1	0.02389	mg/L	0.000976	0.04778	mg/L	0.001952	4.09%
Ba 233.527†	33092.4	7.766	mg/L	0.0106	15.53	mg/L	0.021	0.14%
Be 313.042†	309668.5	0.4896	mg/L	0.00637	0.9791	mg/L	0.01273	1.30%
Ca 317.933†	1408485.3	105.7	mg/L	1.27	211.5	mg/L	2.54	1.20%
Cd 228.802†	17521.9	0.5738	mg/L	0.00198	1.148	mg/L	0.0040	0.35%
Co 228.616†	20122.0	0.6028	mg/L	0.00258	1.206	mg/L	0.0052	0.43%
Cr 267.716†	5479.3	0.9372	mg/L	0.00840	1.874	mg/L	0.0168	0.90%
Cu 324.752†	179239.8	0.7515	mg/L	0.00165	1.503	mg/L	0.0033	0.22%
Fe 273.955†	232589.4	190.7	mg/L	1.87	381.5	mg/L	3.73	0.98%
K 766.490†	44237.3	23.64	mg/L	0.257	47.28	mg/L	0.513	1.08%
Mg 279.077†	104483.7	74.75	mg/L	0.661	149.5	mg/L	1.32	0.88%
Mn 257.610†	679619.3	20.05	mg/L	0.193	40.10	mg/L	0.386	0.96%
Mo 202.031†	141.9	0.00628	mg/L	0.000194	0.01257	mg/L	0.000388	3.08%
Na 589.592†	130840.6	10.94	mg/L	0.091	21.89	mg/L	0.183	0.84%
Na 330.237†	277.4	11.06	mg/L	0.286	22.13	mg/L	0.572	2.58%
Ni 231.604†	2804.5	0.7306	mg/L	0.00498	1.461	mg/L	0.0100	0.68%
Pb 220.353†	23650.2	3.136	mg/L	0.0135	6.271	mg/L	0.0271	0.43%
Sb 206.836†	2096.7	0.6699	mg/L	0.00601	1.340	mg/L	0.0120	0.90%
Se 196.026†	2817.1	2.022	mg/L	0.0081	4.045	mg/L	0.0162	0.40%
Si 288.158†	7388.9	3.660	mg/L	0.0119	7.319	mg/L	0.0237	0.32%
Sn 189.927†	-56.7	-0.00100	mg/L	0.000579	-0.00200	mg/L	0.001158	58.04%
Sr 421.552†	1227052.9	1.399	mg/L	0.0128	2.798	mg/L	0.0255	0.91%
Ti 334.903†	130182.4	6.677	mg/L	0.0601	13.35	mg/L	0.120	0.90%
Tl 190.801†	4333.4	1.818	mg/L	0.0109	3.636	mg/L	0.0219	0.60%
V 292.402†	100468.8	0.8201	mg/L	0.00345	1.640	mg/L	0.0069	0.42%
Zn 206.200†	7379.8	1.950	mg/L	0.0163	3.900	mg/L	0.0326	0.84%

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Sequence No.: 33
Sample ID: ~~VR30 APOST SWC~~ ZZZZZZ
Dilution: 2.000000X BA 11/16/12

Autosampler Location: 330
Date Collected: 11/15/2012 12:01:12 PM
Data Type: Original

Nebulizer Parameters: VR30 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2594992.8	103.5	%	0.45				0.43%
ScR 361.383	335608.7	103.2	%	0.84				0.82%
Ag 328.068†	79832.1	0.4796	mg/L	0.02189	0.9592	mg/L	0.04377	4.56%
Al 308.215†	339836.4	201.2	mg/L	1.74	402.4	mg/L	3.48	0.86%
As 188.979†	3356.7	2.100	mg/L	0.0981	4.199	mg/L	0.1962	4.67%
B 249.677†	176.5	0.02284	mg/L	0.001826	0.04568	mg/L	0.003653	8.00%
Ba 233.527†	33674.2	7.900	mg/L	0.0635	15.80	mg/L	0.127	0.80%
Be 313.042†	284529.7	0.4498	mg/L	0.00789	0.8996	mg/L	0.01578	1.75%
Ca 317.933†	1454406.1	109.2	mg/L	0.98	218.4	mg/L	1.96	0.90%
Cd 228.802†	17478.4	0.5721	mg/L	0.02474	1.144	mg/L	0.0495	4.32%
Co 228.616†	20455.1	0.6118	mg/L	0.02334	1.224	mg/L	0.0467	3.82%
Cr 267.716†	5546.5	0.9480	mg/L	0.01217	1.896	mg/L	0.0243	1.28%
Cu 324.752†	186453.3	0.7822	mg/L	0.02174	1.564	mg/L	0.0435	2.78%
Fe 273.955†	256890.8	210.7	mg/L	1.88	421.3	mg/L	3.75	0.89%
K 766.490†	44265.7	23.66	mg/L	0.260	47.31	mg/L	0.520	1.10%
Mg 279.077†	125449.1	89.75	mg/L	0.805	179.5	mg/L	1.61	0.90%
Mn 257.610†	738942.0	21.80	mg/L	0.164	43.60	mg/L	0.328	0.75%
Mo 202.031†	144.2	0.00637	mg/L	0.000503	0.01274	mg/L	0.001006	7.90%
Na 589.592†	122091.7	10.21	mg/L	0.168	20.42	mg/L	0.337	1.65%
Na 330.237†	259.3	10.51	mg/L	0.410	21.03	mg/L	0.819	3.90%
Ni 231.604†	2835.0	0.7382	mg/L	0.00701	1.476	mg/L	0.0140	0.95%
Pb 220.353†	23574.5	3.129	mg/L	0.0793	6.258	mg/L	0.1586	2.53%
Sb 206.836†	56.9	0.01114	mg/L	0.002907	0.02229	mg/L	0.005814	26.09%
Se 196.026†	2836.4	2.036	mg/L	0.0913	4.072	mg/L	0.1825	4.48%
Si 288.158†	8808.8	4.363	mg/L	0.0737	8.725	mg/L	0.1474	1.69%
Sn 189.927†	-59.7	-0.00162	mg/L	0.003104	-0.00324	mg/L	0.006208	191.83%
Sr 421.552†	1230175.3	1.402	mg/L	0.0146	2.805	mg/L	0.0292	1.04%
Ti 334.903†	139875.0	7.175	mg/L	0.0565	14.35	mg/L	0.113	0.79%
Tl 190.801†	4317.5	1.813	mg/L	0.0810	3.627	mg/L	0.1620	4.47%
V 292.402†	106760.3	0.8711	mg/L	0.01874	1.742	mg/L	0.0375	2.15%
Zn 206.200†	7365.4	1.946	mg/L	0.0129	3.892	mg/L	0.0258	0.66%

Sequence No.: 34
Sample ID: VR30 MB1SPK SWC

Autosampler Location: 331
Date Collected: 11/15/2012 12:04:32 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2591653.2	103.3	%	0.21				0.20%
ScR 361.383	336919.3	103.6	%	0.95				0.92%
Ag 328.068†	84504.2	0.5076	mg/L	0.00109	1.015	mg/L	0.0022	0.21%
Al 308.215†	3536.8	2.086	mg/L	0.0287	4.173	mg/L	0.0574	1.38%
As 188.979†	3611.9	2.045	mg/L	0.0126	4.090	mg/L	0.0251	0.61%
B 249.677†	13.7	0.00078	mg/L	0.001114	0.00156	mg/L	0.002228	142.93%
Ba 233.527†	8873.2	2.090	mg/L	0.0313	4.181	mg/L	0.0627	1.50%
Be 313.042†	310560.1	0.4911	mg/L	0.00713	0.9822	mg/L	0.01426	1.45%
Ca 317.933†	134999.7	10.13	mg/L	0.117	20.27	mg/L	0.234	1.15%
Cd 228.802†	16561.6	0.5422	mg/L	0.00370	1.084	mg/L	0.0074	0.68%
Co 228.616†	17286.5	0.5314	mg/L	0.00170	1.063	mg/L	0.0034	0.32%
Cr 267.716†	3075.6	0.5260	mg/L	0.00748	1.052	mg/L	0.0150	1.42%
Cu 324.752†	127937.3	0.5319	mg/L	0.00068	1.064	mg/L	0.0014	0.13%
Fe 273.955†	2658.4	2.177	mg/L	0.0249	4.353	mg/L	0.0498	1.14%
K 766.490†	18472.9	9.873	mg/L	0.1513	19.75	mg/L	0.303	1.53%
Mg 279.077†	14623.8	10.48	mg/L	0.113	20.95	mg/L	0.227	1.08%
Mn 257.610†	17950.6	0.5299	mg/L	0.00578	1.060	mg/L	0.0116	1.09%
Mo 202.031†	29.2	0.00140	mg/L	0.000130	0.00280	mg/L	0.000261	9.30%
Na 589.592†	113998.7	9.535	mg/L	0.1122	19.07	mg/L	0.224	1.18%
Na 330.237†	278.3	10.05	mg/L	0.112	20.09	mg/L	0.224	1.11%
Ni 231.604†	1887.8	0.4924	mg/L	0.00534	0.9848	mg/L	0.01068	1.08%
Pb 220.353†	15026.0	1.969	mg/L	0.0080	3.939	mg/L	0.0161	0.41%
Sb 206.836†	6573.8	2.118	mg/L	0.0095	4.237	mg/L	0.0190	0.45%
Se 196.026†	2817.9	2.023	mg/L	0.0175	4.046	mg/L	0.0351	0.87%
Si 288.158†	-0.5	0.00305	mg/L	0.000706	0.00610	mg/L	0.001412	23.15%
Sn 189.927†	-24.7	-0.00443	mg/L	0.000104	-0.00887	mg/L	0.000208	2.35%
Sr 421.552†	427348.6	0.4871	mg/L	0.00608	0.9743	mg/L	0.01217	1.25%
Ti 334.903†	112.8	0.00520	mg/L	0.000158	0.01040	mg/L	0.000316	3.04%
Tl 190.801†	4745.2	1.971	mg/L	0.0080	3.942	mg/L	0.0161	0.41%
V 292.402†	63925.6	0.5262	mg/L	0.00197	1.052	mg/L	0.0039	0.37%
Zn 206.200†	2006.0	0.5301	mg/L	0.00719	1.060	mg/L	0.0144	1.36%

Sequence No.: 35
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 11/15/2012 12:08:34 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2584701.0	103.1	%	0.61				0.59%
ScR 361.383	325672.7	100.1	%	1.94				1.94%
Ag 328.068†	158666.8	0.9530	mg/L	0.00386	0.9530	mg/L	0.00386	0.41%
Al 308.215†	3503.9	2.040	mg/L	0.0403	2.040	mg/L	0.0403	1.98%
As 188.979†	3486.3	2.001	mg/L	0.0118	2.001	mg/L	0.0118	0.59%
B 249.677†	7163.0	0.9778	mg/L	0.01693	0.9778	mg/L	0.01693	1.73%
Ba 233.527†	4442.0	1.046	mg/L	0.0137	1.046	mg/L	0.0137	1.31%
Be 313.042†	617705.8	0.9768	mg/L	0.01227	0.9768	mg/L	0.01227	1.26%
Ca 317.933†	28220.9	2.119	mg/L	0.0316	2.119	mg/L	0.0316	1.49%
Cd 228.802†	31430.9	1.042	mg/L	0.0046	1.042	mg/L	0.0046	0.44%
Co 228.616†	34396.2	1.056	mg/L	0.0044	1.056	mg/L	0.0044	0.42%
Cr 267.716†	6131.2	1.050	mg/L	0.0177	1.050	mg/L	0.0177	1.68%
Cu 324.752†	242569.6	1.008	mg/L	0.0007	1.008	mg/L	0.0007	0.07%
Fe 273.955†	2606.1	2.130	mg/L	0.0421	2.130	mg/L	0.0421	1.97%
K 766.490†	37986.6	20.30	mg/L	0.317	20.30	mg/L	0.317	1.56%
Mg 279.077†	2910.9	2.092	mg/L	0.0303	2.092	mg/L	0.0303	1.45%
Mn 257.610†	36040.1	1.064	mg/L	0.0166	1.064	mg/L	0.0166	1.56%
Mo 202.031†	19460.9	1.026	mg/L	0.0035	1.026	mg/L	0.0035	0.34%
Na 589.592†	595455.6	49.80	mg/L	0.761	49.80	mg/L	0.761	1.53%
Na 330.237†	1422.1	52.12	mg/L	0.866	52.12	mg/L	0.866	1.66%
Ni 231.604†	3824.9	0.9973	mg/L	0.01634	0.9973	mg/L	0.01634	1.64%
Pb 220.353†	15159.6	1.987	mg/L	0.0086	1.987	mg/L	0.0086	0.43%
Sb 206.836†	6547.3	2.114	mg/L	0.0099	2.114	mg/L	0.0099	0.47%
Se 196.026†	2730.5	1.960	mg/L	0.0109	1.960	mg/L	0.0109	0.56%
Si 288.158†	4281.6	2.114	mg/L	0.0440	2.114	mg/L	0.0440	2.08%
Sn 189.927†	3775.8	1.030	mg/L	0.0036	1.030	mg/L	0.0036	0.35%
Sr 421.552†	859994.8	0.9803	mg/L	0.01513	0.9803	mg/L	0.01513	1.54%
Ti 334.903†	21156.9	1.085	mg/L	0.0172	1.085	mg/L	0.0172	1.58%
Tl 190.801†	4693.6	1.946	mg/L	0.0087	1.946	mg/L	0.0087	0.45%
V 292.402†	122982.3	1.013	mg/L	0.0025	1.013	mg/L	0.0025	0.25%
Zn 206.200†	3960.6	1.046	mg/L	0.0170	1.046	mg/L	0.0170	1.62%

Sequence No.: 36
Sample ID: CB S

Autosampler Location: 1
Date Collected: 11/15/2012 12:12:40 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589493.1	103.3	%	0.47				0.46%
ScR 361.383	335744.2	103.2	%	1.83				1.77%
Ag 328.068†	-6.4	-0.00004	mg/L	0.000061	-0.00004	mg/L	0.000061	159.74%
Al 308.215†	25.7	0.01518	mg/L	0.009667	0.01518	mg/L	0.009667	63.68%
As 188.979†	2.6	0.00153	mg/L	0.002633	0.00153	mg/L	0.002633	172.20%
B 249.677†	10.9	0.00149	mg/L	0.001118	0.00149	mg/L	0.001118	75.07%
Ba 233.527†	-1.5	-0.00036	mg/L	0.000574	-0.00036	mg/L	0.000574	161.20%
Be 313.042†	109.3	0.00017	mg/L	0.000065	0.00017	mg/L	0.000065	37.81%
Ca 317.933†	92.9	0.00697	mg/L	0.000212	0.00697	mg/L	0.000212	3.03%
Cd 228.802†	-2.1	-0.00008	mg/L	0.000035	-0.00008	mg/L	0.000035	42.49%
Co 228.616†	18.4	0.00056	mg/L	0.000123	0.00056	mg/L	0.000123	21.87%
Cr 267.716†	0.9	0.00016	mg/L	0.000772	0.00016	mg/L	0.000772	489.46%
Cu 324.752†	-86.2	-0.00036	mg/L	0.000087	-0.00036	mg/L	0.000087	24.22%
Fe 273.955†	18.8	0.01542	mg/L	0.002082	0.01542	mg/L	0.002082	13.50%
K 766.490†	-17.9	-0.00954	mg/L	0.019113	-0.00954	mg/L	0.019113	200.30%
Mg 279.077†	20.5	0.01470	mg/L	0.005154	0.01470	mg/L	0.005154	35.06%
Mn 257.610†	47.2	0.00139	mg/L	0.000163	0.00139	mg/L	0.000163	11.69%
Mo 202.031†	12.7	0.00067	mg/L	0.000139	0.00067	mg/L	0.000139	20.78%
Na 589.592†	-2.4	-0.00020	mg/L	0.002650	-0.00020	mg/L	0.002650	>999.9%
Na 330.237†	-0.1	-0.00374	mg/L	0.315563	-0.00374	mg/L	0.315563	>999.9%
Ni 231.604†	-4.0	-0.00104	mg/L	0.000470	-0.00104	mg/L	0.000470	45.12%
Pb 220.353†	5.0	0.00066	mg/L	0.000186	0.00066	mg/L	0.000186	28.23%
Sb 206.836†	12.7	0.00411	mg/L	0.000372	0.00411	mg/L	0.000372	9.05%
Se 196.026†	0.3	0.00020	mg/L	0.004763	0.00020	mg/L	0.004763	>999.9%
Si 288.158†	6.0	0.00296	mg/L	0.004552	0.00296	mg/L	0.004552	153.88%
Sn 189.927†	-1.2	-0.00031	mg/L	0.000198	-0.00031	mg/L	0.000198	63.01%
Sr 421.552†	230.8	0.00026	mg/L	0.000073	0.00026	mg/L	0.000073	27.59%
Ti 334.903†	34.5	0.00177	mg/L	0.001186	0.00177	mg/L	0.001186	66.98%
Tl 190.801†	0.9	0.00038	mg/L	0.001616	0.00038	mg/L	0.001616	424.18%
V 292.402†	4.9	0.00004	mg/L	0.000185	0.00004	mg/L	0.000185	463.22%
Zn 206.200†	2.3	0.00061	mg/L	0.000199	0.00061	mg/L	0.000199	32.87%

Analysis Begun

Start Time: 11/15/2012 12:52:22 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VR30 MB2 SWC
Autosampler Location: 332
Date Collected: 11/15/2012 12:52:23 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB2 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 MB2 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2617075.3	104.4	%	0.39				0.37%
ScR 361.383	333215.2	102.4	%	0.63				0.62%
Ag 328.068†	-48.0	-0.00029	mg/L	0.000270	-0.00058	mg/L	0.000540	93.56%
Al 308.215†	10.0	0.00594	mg/L	0.005524	0.01187	mg/L	0.011047	93.05%
As 188.979†	4.5	0.00255	mg/L	0.000880	0.00511	mg/L	0.001759	34.44%
B 249.677†	0.9	0.00013	mg/L	0.000683	0.00025	mg/L	0.001367	537.55%
Ba 233.527†	-4.5	-0.00107	mg/L	0.000187	-0.00214	mg/L	0.000373	17.44%
Be 313.042†	27.0	0.00004	mg/L	0.000014	0.00009	mg/L	0.000029	33.88%
Ca 317.933†	110.9	0.00833	mg/L	0.000971	0.01665	mg/L	0.001943	11.67%
Cd 228.802†	-8.2	-0.00029	mg/L	0.000134	-0.00058	mg/L	0.000268	45.96%
Co 228.616†	8.0	0.00024	mg/L	0.000103	0.00049	mg/L	0.000206	42.19%
Cr 267.716†	-2.2	-0.00037	mg/L	0.000739	-0.00074	mg/L	0.001477	199.19%
Cu 324.752†	-92.8	-0.00039	mg/L	0.000176	-0.00077	mg/L	0.000352	45.61%
Fe 273.955†	6.6	0.00538	mg/L	0.000751	0.01077	mg/L	0.001501	13.94%
K 766.490†	-27.1	-0.01448	mg/L	0.014965	-0.02897	mg/L	0.029931	103.33%
Mg 279.077†	7.1	0.00509	mg/L	0.004860	0.01019	mg/L	0.009721	95.44%
Mn 257.610†	8.7	0.00026	mg/L	0.000066	0.00051	mg/L	0.000131	25.64%
Mo 202.031†	-0.4	-0.00002	mg/L	0.000074	-0.00004	mg/L	0.000148	378.18%
Na 589.592†	-18.7	-0.00157	mg/L	0.002015	-0.00314	mg/L	0.004030	128.55%
Na 330.237†	1.1	0.04124	mg/L	0.200949	0.08248	mg/L	0.401898	487.25%
Ni 231.604†	-2.2	-0.00057	mg/L	0.000865	-0.00114	mg/L	0.001729	152.33%
Pb 220.353†	3.0	0.00039	mg/L	0.000490	0.00078	mg/L	0.000980	125.52%
Sb 206.836†	3.8	0.00122	mg/L	0.000670	0.00244	mg/L	0.001339	54.87%
Se 196.026†	0.5	0.00036	mg/L	0.000857	0.00073	mg/L	0.001714	235.87%
Si 288.158†	-0.2	-0.00010	mg/L	0.001771	-0.00021	mg/L	0.003543	>999.9%
Sn 189.927†	0.9	0.00025	mg/L	0.000457	0.00050	mg/L	0.000915	184.29%
Sr 421.552†	44.5	0.00005	mg/L	0.000037	0.00010	mg/L	0.000073	72.15%
Ti 334.903†	15.2	0.00078	mg/L	0.000557	0.00156	mg/L	0.001115	71.51%
Tl 190.801†	-3.4	-0.00140	mg/L	0.000522	-0.00281	mg/L	0.001045	37.21%
V 292.402†	-4.4	-0.00004	mg/L	0.000102	-0.00008	mg/L	0.000204	268.77%
Zn 206.200†	5.7	0.00150	mg/L	0.000634	0.00300	mg/L	0.001268	42.25%

Sequence No.: 2
Sample ID: VR30 E SWC

Dilution: 2.000000X

Del

Autosampler Location: 333
Date Collected: 11/15/2012 12:56:40 PM
Data Type: Original

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2660633.7	106.1	%	0.32				0.30%
ScR 361.383	341239.4	104.9	%	0.60				0.57%
Ag 328.068†	-554.3	-0.00319	mg/L	0.000022	-0.00638	mg/L	0.000044	0.68%
Al 308.215†	573454.4	339.5	mg/L	3.95	679.0	mg/L	7.90	1.16%
As 188.979†	-272.3	0.09715	mg/L	0.001040	0.1943	mg/L	0.00208	1.07%
B 249.677†	142.7	0.01924	mg/L	0.000974	0.03848	mg/L	0.001948	5.06%
Ba 233.527†	16268.3	3.787	mg/L	0.0418	7.574	mg/L	0.0836	1.10%
Be 313.042†	6374.6	0.00988	mg/L	0.000129	0.01976	mg/L	0.000258	1.31%
Ca 317.933†	521221.1	39.13	mg/L	0.655	78.26	mg/L	1.309	1.67%
Cd 228.802†	177.1	0.00448	mg/L	0.000160	0.00896	mg/L	0.000319	3.56%
Co 228.616†	4193.5	0.1078	mg/L	0.00073	0.2156	mg/L	0.00146	0.67%
Cr 267.716†	1715.6	0.2983	mg/L	0.00313	0.5966	mg/L	0.00626	1.05%
Cu 324.752†	62528.1	0.2700	mg/L	0.00079	0.5400	mg/L	0.00157	0.29%
Fe 273.955†	343839.2	282.0	mg/L	3.48	564.0	mg/L	6.97	1.24%
K 766.490†	26608.6	14.22	mg/L	0.138	28.44	mg/L	0.276	0.97%
Mg 279.077†	95420.0	68.20	mg/L	1.067	136.4	mg/L	2.13	1.56%
Mn 257.610†	149200.1	4.401	mg/L	0.0519	8.803	mg/L	0.1037	1.18%
Mo 202.031†	58.1	0.00262	mg/L	0.000495	0.00525	mg/L	0.000989	18.86%
Na 589.592†	28229.7	2.361	mg/L	0.0187	4.722	mg/L	0.0375	0.79%
Na 330.237†	1.4	1.742	mg/L	0.0780	3.485	mg/L	0.1560	4.48%
Ni 231.604†	975.5	0.2543	mg/L	0.00223	0.5086	mg/L	0.00446	0.88%
Pb 220.353†	966.8	0.1965	mg/L	0.00134	0.3930	mg/L	0.00268	0.68%
Sb 206.836†	22.9	0.00876	mg/L	0.001903	0.01752	mg/L	0.003805	21.72%
Se 196.026†	37.2	0.02642	mg/L	0.001630	0.05283	mg/L	0.003260	6.17%
Si 288.158†	3011.7	1.495	mg/L	0.0223	2.991	mg/L	0.0446	1.49%
Sn 189.927†	-45.6	-0.00631	mg/L	0.001353	-0.01261	mg/L	0.002706	21.45%
Sr 421.552†	388997.1	0.4434	mg/L	0.00438	0.8869	mg/L	0.00877	0.99%
Ti 334.903†	172854.7	8.871	mg/L	0.1058	17.74	mg/L	0.212	1.19%
Tl 190.801†	-69.9	-0.00138	mg/L	0.001171	-0.00275	mg/L	0.002342	85.08%
V 292.402†	57432.6	0.4578	mg/L	0.00137	0.9157	mg/L	0.00275	0.30%
Zn 206.200†	3762.7	0.9941	mg/L	0.01597	1.988	mg/L	0.0319	1.61%

Sequence No.: 3
Sample ID: VR30 F SWC

Autosampler Location: 334
Date Collected: 11/15/2012 1:00:42 PM
Data Type: Original

Dilution: 2.000000X

Dal

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2679909.2	106.9	%	0.40				0.38%
ScR 361.383	341248.1	104.9	%	1.98				1.89%
Ag 328.068†	-322.0	-0.00181	mg/L	0.000233	-0.00361	mg/L	0.000467	12.91%
Al 308.215†	577534.1	341.9	mg/L	5.84	683.9	mg/L	11.68	1.71%
As 188.979†	-282.9	0.09554	mg/L	0.010099	0.1911	mg/L	0.02020	10.57%
B 249.677†	126.1	0.01697	mg/L	0.001478	0.03394	mg/L	0.002956	8.71%
Ba 233.527†	13742.6	3.193	mg/L	0.0435	6.387	mg/L	0.0870	1.36%
Be 313.042†	6349.8	0.00985	mg/L	0.000157	0.01969	mg/L	0.000313	1.59%
Ca 317.933†	475568.7	35.70	mg/L	0.754	71.41	mg/L	1.508	2.11%
Cd 228.802†	182.0	0.00477	mg/L	0.000092	0.00953	mg/L	0.000185	1.94%
Co 228.616†	4109.6	0.1051	mg/L	0.00120	0.2102	mg/L	0.00241	1.14%
Cr 267.716†	1705.1	0.2964	mg/L	0.00377	0.5927	mg/L	0.00754	1.27%
Cu 324.752†	68683.0	0.2952	mg/L	0.00127	0.5904	mg/L	0.00254	0.43%
Fe 273.955†	333668.6	273.6	mg/L	5.47	547.3	mg/L	10.95	2.00%
K 766.490†	26697.9	14.27	mg/L	0.235	28.54	mg/L	0.470	1.65%
Mg 279.077†	92023.1	65.77	mg/L	1.282	131.5	mg/L	2.56	1.95%
Mn 257.610†	176208.6	5.198	mg/L	0.1042	10.40	mg/L	0.208	2.00%
Mo 202.031†	58.4	0.00267	mg/L	0.000614	0.00535	mg/L	0.001229	22.97%
Na 589.592†	29001.1	2.426	mg/L	0.0422	4.851	mg/L	0.0843	1.74%
Na 330.237†	1.9	1.793	mg/L	0.4468	3.586	mg/L	0.8936	24.92%
Ni 231.604†	968.2	0.2524	mg/L	0.00322	0.5048	mg/L	0.00644	1.28%
Pb 220.353†	730.6	0.1664	mg/L	0.00174	0.3329	mg/L	0.00348	1.04%
Sb 206.836†	15.1	0.00619	mg/L	0.004980	0.01238	mg/L	0.009960	80.46%
Se 196.026†	44.2	0.03145	mg/L	0.003514	0.06291	mg/L	0.007028	11.17%
Si 288.158†	2711.1	1.347	mg/L	0.0203	2.693	mg/L	0.0406	1.51%
Sn 189.927†	-48.5	-0.00750	mg/L	0.001118	-0.01500	mg/L	0.002237	14.91%
Sr 421.552†	402799.2	0.4592	mg/L	0.00788	0.9183	mg/L	0.01576	1.72%
Ti 334.903†	175694.3	9.017	mg/L	0.1661	18.03	mg/L	0.332	1.84%
Tl 190.801†	-60.5	0.00176	mg/L	0.001649	0.00352	mg/L	0.003297	93.73%
V 292.402†	53515.8	0.4260	mg/L	0.00119	0.8521	mg/L	0.00238	0.28%
Zn 206.200†	3785.0	1.000	mg/L	0.0134	2.000	mg/L	0.0269	1.34%

Sequence No.: 4
Sample ID: VR30 G SWC

Autosampler Location: 335
Date Collected: 11/15/2012 1:04:45 PM
Data Type: Original

Dilution: 2.000000X

Del

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2707751.5	108.0	%	0.28				0.26%
ScR 361.383	345689.8	106.3	%	1.69				1.59%
Ag 328.068†	188.0	0.00127	mg/L	0.000121	0.00253	mg/L	0.000241	9.54%
Al 308.215†	617317.1	365.5	mg/L	6.55	731.0	mg/L	13.09	1.79%
As 188.979†	-300.2	0.1079	mg/L	0.00837	0.2158	mg/L	0.01673	7.75%
B 249.677†	126.0	0.01695	mg/L	0.000363	0.03390	mg/L	0.000726	2.14%
Ba 233.527†	12688.3	2.942	mg/L	0.0595	5.884	mg/L	0.1190	2.02%
Be 313.042†	6699.9	0.01038	mg/L	0.000189	0.02077	mg/L	0.000377	1.82%
Ca 317.933†	545631.1	40.96	mg/L	0.854	81.93	mg/L	1.707	2.08%
Cd 228.802†	144.8	0.00345	mg/L	0.000295	0.00691	mg/L	0.000590	8.54%
Co 228.616†	4199.7	0.1061	mg/L	0.00088	0.2123	mg/L	0.00177	0.83%
Cr 267.716†	2481.8	0.4295	mg/L	0.00888	0.8590	mg/L	0.01776	2.07%
Cu 324.752†	90542.3	0.3866	mg/L	0.00049	0.7733	mg/L	0.00097	0.13%
Fe 273.955†	356334.8	292.2	mg/L	5.75	584.5	mg/L	11.50	1.97%
K 766.490†	27867.6	14.89	mg/L	0.257	29.79	mg/L	0.513	1.72%
Mg 279.077†	103284.1	73.83	mg/L	1.430	147.7	mg/L	2.86	1.94%
Mn 257.610†	160869.9	4.746	mg/L	0.0934	9.491	mg/L	0.1868	1.97%
Mo 202.031†	66.8	0.00305	mg/L	0.000389	0.00611	mg/L	0.000778	12.74%
Na 589.592†	34362.6	2.874	mg/L	0.0546	5.748	mg/L	0.1092	1.90%
Na 330.237†	8.1	2.212	mg/L	0.1882	4.424	mg/L	0.3765	8.51%
Ni 231.604†	1170.2	0.3050	mg/L	0.00643	0.6101	mg/L	0.01286	2.11%
Pb 220.353†	902.5	0.1940	mg/L	0.00137	0.3879	mg/L	0.00274	0.71%
Sb 206.836†	10.9	0.00342	mg/L	0.001902	0.00683	mg/L	0.003804	55.69%
Se 196.026†	45.1	0.03204	mg/L	0.002848	0.06408	mg/L	0.005696	8.89%
Si 288.158†	2579.2	1.283	mg/L	0.0157	2.565	mg/L	0.0314	1.22%
Sn 189.927†	-50.8	-0.00736	mg/L	0.000899	-0.01471	mg/L	0.001799	12.23%
Sr 421.552†	468997.3	0.5346	mg/L	0.00930	1.069	mg/L	0.0186	1.74%
Ti 334.903†	191144.6	9.810	mg/L	0.1846	19.62	mg/L	0.369	1.88%
Tl 190.801†	-67.5	0.00063	mg/L	0.002311	0.00126	mg/L	0.004621	367.04%
V 292.402†	57970.4	0.4620	mg/L	0.00088	0.9239	mg/L	0.00177	0.19%
Zn 206.200†	3659.9	0.9669	mg/L	0.01814	1.934	mg/L	0.0363	1.88%

Sequence No.: 5
Sample ID: VR30 H SWC

Dilution: 2.000000X

Del

Autosampler Location: 336
Date Collected: 11/15/2012 1:08:47 PM
Data Type: Original

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2654240.0	105.8	%	0.22				0.21%
ScR 361.383	344085.2	105.8	%	1.01				0.96%
Ag 328.068†	-263.1	-0.00148	mg/L	0.000171	-0.00296	mg/L	0.000343	11.56%
Al 308.215†	429309.0	254.2	mg/L	4.79	508.4	mg/L	9.57	1.88%
As 188.979†	-171.5	0.09841	mg/L	0.004323	0.1968	mg/L	0.00865	4.39%
B 249.677†	124.1	0.01676	mg/L	0.000622	0.03351	mg/L	0.001244	3.71%
Ba 233.527†	19347.2	4.523	mg/L	0.0468	9.047	mg/L	0.0936	1.03%
Be 313.042†	4657.0	0.00721	mg/L	0.000091	0.01443	mg/L	0.000182	1.26%
Ca 317.933†	477468.4	35.85	mg/L	0.700	71.69	mg/L	1.400	1.95%
Cd 228.802†	361.5	0.01088	mg/L	0.000136	0.02177	mg/L	0.000272	1.25%
Co 228.616†	3158.3	0.08056	mg/L	0.000484	0.1611	mg/L	0.00097	0.60%
Cr 267.716†	1447.0	0.2517	mg/L	0.00189	0.5034	mg/L	0.00379	0.75%
Cu 324.752†	33581.9	0.1474	mg/L	0.00039	0.2949	mg/L	0.00077	0.26%
Fe 273.955†	264859.2	217.2	mg/L	3.77	434.4	mg/L	7.53	1.73%
K 766.490†	26733.7	14.29	mg/L	0.243	28.58	mg/L	0.486	1.70%
Mg 279.077†	58316.8	41.66	mg/L	0.776	83.32	mg/L	1.552	1.86%
Mn 257.610†	301755.4	8.902	mg/L	0.1530	17.80	mg/L	0.306	1.72%
Mo 202.031†	77.0	0.00366	mg/L	0.000191	0.00732	mg/L	0.000383	5.23%
Na 589.592†	22299.9	1.865	mg/L	0.0347	3.730	mg/L	0.0694	1.86%
Na 330.237†	13.7	1.630	mg/L	0.1935	3.260	mg/L	0.3870	11.87%
Ni 231.604†	842.5	0.2196	mg/L	0.00326	0.4392	mg/L	0.00653	1.49%
Pb 220.353†	2333.7	0.3579	mg/L	0.00244	0.7159	mg/L	0.00489	0.68%
Sb 206.836†	17.0	0.00617	mg/L	0.000321	0.01234	mg/L	0.000643	5.21%
Se 196.026†	29.6	0.02104	mg/L	0.006733	0.04208	mg/L	0.013467	32.00%
Si 288.158†	5362.5	2.653	mg/L	0.0154	5.306	mg/L	0.0307	0.58%
Sn 189.927†	-40.7	-0.00565	mg/L	0.000536	-0.01130	mg/L	0.001072	9.49%
Sr 421.552†	379374.1	0.4325	mg/L	0.00767	0.8649	mg/L	0.01533	1.77%
Ti 334.903†	134687.0	6.912	mg/L	0.1324	13.82	mg/L	0.265	1.92%
Tl 190.801†	-45.1	0.00265	mg/L	0.004043	0.00530	mg/L	0.008086	152.57%
V 292.402†	41558.2	0.3316	mg/L	0.00094	0.6631	mg/L	0.00187	0.28%
Zn 206.200†	5120.7	1.353	mg/L	0.0149	2.706	mg/L	0.0297	1.10%

Sequence No.: 6
Sample ID: VR30 I SWC

Autosampler Location: 337
Date Collected: 11/15/2012 1:12:49 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 I SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2638198.9	105.2	%	0.37				0.35%
ScR 361.383	340162.3	104.6	%	1.78				1.71%
Ag 328.068†	-490.0	-0.00284	mg/L	0.000096	-0.00569	mg/L	0.000191	3.36%
Al 308.215†	279358.0	165.4	mg/L	2.06	330.8	mg/L	4.12	1.24%
As 188.979†	-24.6	0.1622	mg/L	0.00419	0.3244	mg/L	0.00837	2.58%
B 249.677†	100.1	0.01348	mg/L	0.000740	0.02696	mg/L	0.001481	5.49%
Ba 233.527†	10635.7	2.473	mg/L	0.0234	4.946	mg/L	0.0467	0.94%
Be 313.042†	4315.4	0.00668	mg/L	0.000082	0.01336	mg/L	0.000164	1.22%
Ca 317.933†	617169.8	46.33	mg/L	0.537	92.67	mg/L	1.075	1.16%
Cd 228.802†	530.3	0.01609	mg/L	0.000148	0.03218	mg/L	0.000296	0.92%
Co 228.616†	3277.2	0.08585	mg/L	0.000885	0.1717	mg/L	0.00177	1.03%
Cr 267.716†	1307.0	0.2263	mg/L	0.00106	0.4525	mg/L	0.00212	0.47%
Cu 324.752†	40989.2	0.1776	mg/L	0.00067	0.3553	mg/L	0.00135	0.38%
Fe 273.955†	246718.0	202.3	mg/L	2.35	404.7	mg/L	4.70	1.16%
K 766.490†	20237.0	10.82	mg/L	0.181	21.63	mg/L	0.362	1.67%
Mg 279.077†	67774.2	48.44	mg/L	0.601	96.88	mg/L	1.202	1.24%
Mn 257.610†	361486.4	10.66	mg/L	0.125	21.33	mg/L	0.250	1.17%
Mo 202.031†	110.0	0.00528	mg/L	0.000522	0.01057	mg/L	0.001043	9.87%
Na 589.592†	11295.0	0.9447	mg/L	0.00929	1.889	mg/L	0.0186	0.98%
Na 330.237†	-14.2	0.5052	mg/L	0.13090	1.010	mg/L	0.2618	25.91%
Ni 231.604†	677.2	0.1765	mg/L	0.00302	0.3531	mg/L	0.00604	1.71%
Pb 220.353†	4457.1	0.6154	mg/L	0.00232	1.231	mg/L	0.0046	0.38%
Sb 206.836†	22.9	0.00815	mg/L	0.001462	0.01630	mg/L	0.002924	17.94%
Se 196.026†	18.4	0.01298	mg/L	0.005896	0.02597	mg/L	0.011791	45.41%
Si 288.158†	5593.1	2.768	mg/L	0.0296	5.536	mg/L	0.0592	1.07%
Sn 189.927†	-48.4	-0.00654	mg/L	0.000554	-0.01308	mg/L	0.001107	8.47%
Sr 421.552†	517145.2	0.5895	mg/L	0.00751	1.179	mg/L	0.0150	1.27%
Ti 334.903†	121886.0	6.254	mg/L	0.0757	12.51	mg/L	0.151	1.21%
Tl 190.801†	-44.1	0.00147	mg/L	0.000333	0.00295	mg/L	0.000665	22.57%
V 292.402†	41930.6	0.3357	mg/L	0.00109	0.6714	mg/L	0.00218	0.32%
Zn 206.200†	4542.8	1.200	mg/L	0.0122	2.401	mg/L	0.0245	1.02%

Sequence No.: 7
Sample ID: VR30 J SWC

Autosampler Location: 338
Date Collected: 11/15/2012 1:16:36 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 J SWC

Analyte	Back Pressure	Flow
A11	217.0 kPa	0.75 L/min

Mean Data: VR30 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2631611.4	104.9	%	0.38				0.36%
ScR 361.383	337645.3	103.8	%	0.69				0.67%
Ag 328.068†	-326.5	-0.00185	mg/L	0.000135	-0.00371	mg/L	0.000270	7.28%
Al 308.215†	348635.3	206.4	mg/L	2.40	412.8	mg/L	4.79	1.16%
As 188.979†	16.4	0.2290	mg/L	0.00577	0.4579	mg/L	0.01154	2.52%
B 249.677†	93.9	0.01261	mg/L	0.001599	0.02522	mg/L	0.003197	12.68%
Ba 233.527†	11269.5	2.619	mg/L	0.0188	5.237	mg/L	0.0376	0.72%
Be 313.042†	4298.5	0.00663	mg/L	0.000060	0.01326	mg/L	0.000120	0.90%
Ca 317.933†	414621.2	31.13	mg/L	0.306	62.25	mg/L	0.611	0.98%
Cd 228.802†	536.0	0.01596	mg/L	0.000205	0.03192	mg/L	0.000409	1.28%
Co 228.616†	3654.4	0.09425	mg/L	0.000365	0.1885	mg/L	0.00073	0.39%
Cr 267.716†	1645.3	0.2846	mg/L	0.00223	0.5692	mg/L	0.00447	0.79%
Cu 324.752†	41679.9	0.1812	mg/L	0.00128	0.3624	mg/L	0.00255	0.70%
Fe 273.955†	274917.8	225.5	mg/L	2.76	450.9	mg/L	5.53	1.23%
K 766.490†	20512.0	10.96	mg/L	0.089	21.92	mg/L	0.177	0.81%
Mg 279.077†	70566.0	50.43	mg/L	0.517	100.9	mg/L	1.03	1.02%
Mn 257.610†	568383.0	16.77	mg/L	0.191	33.54	mg/L	0.382	1.14%
Mo 202.031†	102.1	0.00503	mg/L	0.000337	0.01005	mg/L	0.000674	6.71%
Na 589.592†	19300.4	1.614	mg/L	0.0129	3.229	mg/L	0.0257	0.80%
Na 330.237†	-12.7	0.8629	mg/L	0.09781	1.726	mg/L	0.1956	11.34%
Ni 231.604†	890.7	0.2322	mg/L	0.00298	0.4644	mg/L	0.00596	1.28%
Pb 220.353†	5390.9	0.7467	mg/L	0.00163	1.493	mg/L	0.0033	0.22%
Sb 206.836†	33.1	0.01135	mg/L	0.001621	0.02270	mg/L	0.003241	14.28%
Se 196.026†	28.7	0.02035	mg/L	0.006621	0.04070	mg/L	0.013242	32.53%
Si 288.158†	3860.3	1.912	mg/L	0.0159	3.825	mg/L	0.0318	0.83%
Sn 189.927†	-42.7	-0.00665	mg/L	0.001903	-0.01330	mg/L	0.003806	28.62%
Sr 421.552†	297277.9	0.3389	mg/L	0.00327	0.6778	mg/L	0.00654	0.96%
Ti 334.903†	150957.3	7.747	mg/L	0.0913	15.49	mg/L	0.183	1.18%
Tl 190.801†	-46.4	0.00278	mg/L	0.002061	0.00557	mg/L	0.004121	74.00%
V 292.402†	44886.7	0.3594	mg/L	0.00245	0.7189	mg/L	0.00491	0.68%
Zn 206.200†	4988.4	1.318	mg/L	0.0085	2.636	mg/L	0.0170	0.65%

Sequence No.: 8
Sample ID: VR30 K SWC

Autosampler Location: 339
Date Collected: 11/15/2012 1:20:38 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2624190.2	104.6	%	0.24				0.23%
ScR 361.383	335985.6	103.3	%	1.18				1.14%
Ag 328.068†	-320.1	-0.00183	mg/L	0.000137	-0.00366	mg/L	0.000275	7.52%
Al 308.215†	338454.5	200.4	mg/L	2.10	400.8	mg/L	4.20	1.05%
As 188.979†	-177.1	0.1384	mg/L	0.00381	0.2768	mg/L	0.00763	2.76%
B 249.677†	154.6	0.02094	mg/L	0.001201	0.04188	mg/L	0.002402	5.73%
Ba 233.527†	9345.9	2.170	mg/L	0.0148	4.339	mg/L	0.0296	0.68%
Be 313.042†	4512.2	0.00697	mg/L	0.000062	0.01394	mg/L	0.000123	0.88%
Ca 317.933†	732114.1	54.96	mg/L	0.634	109.9	mg/L	1.27	1.15%
Cd 228.802†	548.4	0.01732	mg/L	0.000206	0.03464	mg/L	0.000411	1.19%
Co 228.616†	3049.5	0.07465	mg/L	0.000350	0.1493	mg/L	0.00070	0.47%
Cr 267.716†	1403.9	0.2432	mg/L	0.00236	0.4865	mg/L	0.00471	0.97%
Cu 324.752†	36060.2	0.1566	mg/L	0.00035	0.3132	mg/L	0.00071	0.23%
Fe 273.955†	242851.0	199.2	mg/L	2.40	398.3	mg/L	4.79	1.20%
K 766.490†	22034.4	11.78	mg/L	0.095	23.55	mg/L	0.190	0.81%
Mg 279.077†	58661.6	41.92	mg/L	0.459	83.83	mg/L	0.919	1.10%
Mn 257.610†	363923.2	10.74	mg/L	0.121	21.47	mg/L	0.242	1.12%
Mo 202.031†	135.7	0.00655	mg/L	0.000274	0.01309	mg/L	0.000549	4.19%
Na 589.592†	23060.6	1.929	mg/L	0.0171	3.858	mg/L	0.0343	0.89%
Na 330.237†	-9.6	1.057	mg/L	0.2551	2.115	mg/L	0.5102	24.12%
Ni 231.604†	750.4	0.1956	mg/L	0.00167	0.3912	mg/L	0.00334	0.85%
Pb 220.353†	4422.8	0.6195	mg/L	0.00106	1.239	mg/L	0.0021	0.17%
Sb 206.836†	19.2	0.00757	mg/L	0.002306	0.01513	mg/L	0.004613	30.48%
Se 196.026†	13.0	0.00908	mg/L	0.008287	0.01816	mg/L	0.016574	91.26%
Si 288.158†	4943.3	2.446	mg/L	0.0129	4.892	mg/L	0.0257	0.53%
Sn 189.927†	-51.9	-0.00609	mg/L	0.002353	-0.01219	mg/L	0.004705	38.61%
Sr 421.552†	1032142.7	1.177	mg/L	0.0113	2.353	mg/L	0.0226	0.96%
Ti 334.903†	164824.5	8.458	mg/L	0.0845	16.92	mg/L	0.169	1.00%
Tl 190.801†	-38.6	0.00351	mg/L	0.005796	0.00701	mg/L	0.011592	165.35%
V 292.402†	39529.4	0.3149	mg/L	0.00154	0.6299	mg/L	0.00307	0.49%
Zn 206.200†	5912.4	1.562	mg/L	0.0154	3.124	mg/L	0.0308	0.99%

Sequence No.: 9
Sample ID: VR30 L SWC

Autosampler Location: 340
Date Collected: 11/15/2012 1:24:27 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 L SWC

Analyte	Back Pressure	Flow
A11	218.0 kPa	0.75 L/min

Mean Data: VR30 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2606762.5	103.9	%	0.21				0.20%
ScR 361.383	333057.4	102.4	%	0.64				0.62%
Ag 328.068†	-485.5	-0.00283	mg/L	0.000126	-0.00567	mg/L	0.000253	4.46%
Al 308.215†	283268.8	167.7	mg/L	0.59	335.4	mg/L	1.17	0.35%
As 188.979†	-100.3	0.1199	mg/L	0.00287	0.2398	mg/L	0.00573	2.39%
B 249.677†	170.8	0.02319	mg/L	0.001771	0.04637	mg/L	0.003541	7.64%
Ba 233.527†	17335.6	4.056	mg/L	0.0257	8.112	mg/L	0.0514	0.63%
Be 313.042†	4292.3	0.00666	mg/L	0.000019	0.01331	mg/L	0.000037	0.28%
Ca 317.933†	715141.1	53.69	mg/L	0.160	107.4	mg/L	0.32	0.30%
Cd 228.802†	625.0	0.01978	mg/L	0.000282	0.03956	mg/L	0.000563	1.42%
Co 228.616†	2526.8	0.06294	mg/L	0.000904	0.1259	mg/L	0.00181	1.44%
Cr 267.716†	1048.1	0.1815	mg/L	0.00035	0.3630	mg/L	0.00071	0.20%
Cu 324.752†	32174.3	0.1399	mg/L	0.00213	0.2798	mg/L	0.00426	1.52%
Fe 273.955†	213541.6	175.1	mg/L	0.20	350.3	mg/L	0.40	0.11%
K 766.490†	22267.0	11.90	mg/L	0.084	23.80	mg/L	0.169	0.71%
Mg 279.077†	52178.4	37.28	mg/L	0.091	74.57	mg/L	0.183	0.25%
Mn 257.610†	458300.9	13.52	mg/L	0.023	27.04	mg/L	0.047	0.17%
Mo 202.031†	85.9	0.00394	mg/L	0.000129	0.00787	mg/L	0.000258	3.28%
Na 589.592†	12112.8	1.013	mg/L	0.0085	2.026	mg/L	0.0170	0.84%
Na 330.237†	-17.4	0.3020	mg/L	0.31362	0.6039	mg/L	0.62724	103.86%
Ni 231.604†	528.1	0.1377	mg/L	0.00059	0.2753	mg/L	0.00117	0.43%
Pb 220.353†	5664.5	0.7753	mg/L	0.01055	1.551	mg/L	0.0211	1.36%
Sb 206.836†	21.4	0.00808	mg/L	0.001734	0.01617	mg/L	0.003468	21.45%
Se 196.026†	14.7	0.01038	mg/L	0.005925	0.02076	mg/L	0.011849	57.08%
Si 288.158†	5857.0	2.897	mg/L	0.0168	5.793	mg/L	0.0336	0.58%
Sn 189.927†	-47.1	-0.00525	mg/L	0.001717	-0.01051	mg/L	0.003435	32.69%
Sr 421.552†	938634.2	1.070	mg/L	0.0044	2.140	mg/L	0.0089	0.41%
Ti 334.903†	122552.8	6.288	mg/L	0.0193	12.58	mg/L	0.039	0.31%
Tl 190.801†	-30.9	0.00436	mg/L	0.001849	0.00872	mg/L	0.003698	42.40%
V 292.402†	35051.8	0.2805	mg/L	0.00374	0.5609	mg/L	0.00749	1.34%
Zn 206.200†	5646.0	1.492	mg/L	0.0055	2.983	mg/L	0.0111	0.37%

Sequence No.: 10
Sample ID: VR30 MB2SPK SWC

Autosampler Location: 341
Date Collected: 11/15/2012 1:28:31 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB2SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 MB2SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2583393.3	103.0	%	0.38				0.37%
ScR 361.383	336669.0	103.5	%	0.88				0.85%
Ag 328.068†	83511.5	0.5016	mg/L	0.00343	1.003	mg/L	0.0069	0.68%
Al 308.215†	3470.2	2.047	mg/L	0.0096	4.094	mg/L	0.0191	0.47%
As 188.979†	3546.0	2.008	mg/L	0.0017	4.016	mg/L	0.0033	0.08%
B 249.677†	10.4	0.00035	mg/L	0.000856	0.00069	mg/L	0.001713	247.26%
Ba 233.527†	8737.5	2.058	mg/L	0.0179	4.117	mg/L	0.0357	0.87%
Be 313.042†	307168.8	0.4857	mg/L	0.00280	0.9715	mg/L	0.00561	0.58%
Ca 317.933†	132573.8	9.953	mg/L	0.0351	19.91	mg/L	0.070	0.35%
Cd 228.802†	16391.6	0.5367	mg/L	0.00317	1.073	mg/L	0.0063	0.59%
Co 228.616†	17042.8	0.5239	mg/L	0.00190	1.048	mg/L	0.0038	0.36%
Cr 267.716†	3036.8	0.5194	mg/L	0.00464	1.039	mg/L	0.0093	0.89%
Cu 324.752†	126197.6	0.5246	mg/L	0.00393	1.049	mg/L	0.0079	0.75%
Fe 273.955†	2629.2	2.153	mg/L	0.0171	4.305	mg/L	0.0343	0.80%
K 766.490†	18261.5	9.760	mg/L	0.0523	19.52	mg/L	0.105	0.54%
Mg 279.077†	14420.4	10.33	mg/L	0.087	20.66	mg/L	0.173	0.84%
Mn 257.610†	17707.8	0.5227	mg/L	0.00415	1.045	mg/L	0.0083	0.79%
Mo 202.031†	22.8	0.00107	mg/L	0.000127	0.00213	mg/L	0.000253	11.89%
Na 589.592†	112844.4	9.438	mg/L	0.0445	18.88	mg/L	0.089	0.47%
Na 330.237†	274.2	9.907	mg/L	0.1316	19.81	mg/L	0.263	1.33%
Ni 231.604†	1880.4	0.4893	mg/L	0.00366	0.9786	mg/L	0.00731	0.75%
Pb 220.353†	14832.5	1.944	mg/L	0.0078	3.888	mg/L	0.0156	0.40%
Sb 206.836†	20.5	0.00115	mg/L	0.001922	0.00230	mg/L	0.003844	166.88%
Se 196.026†	2779.3	1.996	mg/L	0.0019	3.991	mg/L	0.0038	0.10%
Si 288.158†	-2.0	0.00226	mg/L	0.001568	0.00452	mg/L	0.003135	69.41%
Sn 189.927†	-18.7	-0.00378	mg/L	0.000321	-0.00757	mg/L	0.000642	8.48%
Sr 421.552†	422301.0	0.4814	mg/L	0.00243	0.9628	mg/L	0.00487	0.51%
Ti 334.903†	115.0	0.00532	mg/L	0.000447	0.01064	mg/L	0.000895	8.41%
Tl 190.801†	4669.5	1.940	mg/L	0.0062	3.879	mg/L	0.0123	0.32%
V 292.402†	62904.7	0.5178	mg/L	0.00375	1.036	mg/L	0.0075	0.72%
Zn 206.200†	1894.2	0.5005	mg/L	0.00393	1.001	mg/L	0.0079	0.79%

Sequence No.: 11
Sample ID: CV b

Autosampler Location: 7
Date Collected: 11/15/2012 1:32:33 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2568214.2	102.4	%	0.43				0.42%
ScR 361.383	330364.6	101.5	%	1.15				1.14%
Ag 328.068†	167191.7	1.004	mg/L	0.0020	1.004	mg/L	0.0020	0.20%
Al 308.215†	3489.0	2.031	mg/L	0.0203	2.031	mg/L	0.0203	1.00%
As 188.979†	3578.1	2.053	mg/L	0.0085	2.053	mg/L	0.0085	0.41%
B 249.677†	7088.0	0.9676	mg/L	0.01032	0.9676	mg/L	0.01032	1.07%
Ba 233.527†	4376.5	1.031	mg/L	0.0116	1.031	mg/L	0.0116	1.12%
Be 313.042†	612954.1	0.9693	mg/L	0.01102	0.9693	mg/L	0.01102	1.14%
Ca 317.933†	27974.9	2.100	mg/L	0.0163	2.100	mg/L	0.0163	0.77%
Cd 228.802†	32402.1	1.074	mg/L	0.0009	1.074	mg/L	0.0009	0.08%
Co 228.616†	34128.0	1.048	mg/L	0.0018	1.048	mg/L	0.0018	0.17%
Cr 267.716†	6078.9	1.041	mg/L	0.0072	1.041	mg/L	0.0072	0.69%
Cu 324.752†	243690.7	1.013	mg/L	0.0016	1.013	mg/L	0.0016	0.16%
Fe 273.955†	2625.0	2.145	mg/L	0.0246	2.145	mg/L	0.0246	1.15%
K 766.490†	37838.9	20.22	mg/L	0.288	20.22	mg/L	0.288	1.43%
Mg 279.077†	2853.9	2.052	mg/L	0.0316	2.052	mg/L	0.0316	1.54%
Mn 257.610†	36006.8	1.063	mg/L	0.0068	1.063	mg/L	0.0068	0.64%
Mo 202.031†	19324.7	1.018	mg/L	0.0039	1.018	mg/L	0.0039	0.38%
Na 589.592†	592922.5	49.59	mg/L	0.535	49.59	mg/L	0.535	1.08%
Na 330.237†	1413.3	51.80	mg/L	0.184	51.80	mg/L	0.184	0.35%
Ni 231.604†	3776.6	0.9847	mg/L	0.00641	0.9847	mg/L	0.00641	0.65%
Pb 220.353†	15039.9	1.972	mg/L	0.0082	1.972	mg/L	0.0082	0.42%
Sb 206.836†	6686.3	2.160	mg/L	0.0099	2.160	mg/L	0.0099	0.46%
Se 196.026†	2805.9	2.014	mg/L	0.0067	2.014	mg/L	0.0067	0.33%
Si 288.158†	4264.8	2.105	mg/L	0.0211	2.105	mg/L	0.0211	1.00%
Sn 189.927†	3870.2	1.056	mg/L	0.0046	1.056	mg/L	0.0046	0.44%
Sr 421.552†	855229.7	0.9749	mg/L	0.01118	0.9749	mg/L	0.01118	1.15%
Ti 334.903†	21023.2	1.078	mg/L	0.0087	1.078	mg/L	0.0087	0.81%
Tl 190.801†	4782.3	1.983	mg/L	0.0100	1.983	mg/L	0.0100	0.51%
V 292.402†	128218.6	1.055	mg/L	0.0010	1.055	mg/L	0.0010	0.10%
Zn 206.200†	3915.9	1.034	mg/L	0.0129	1.034	mg/L	0.0129	1.25%

Sequence No.: 12
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 11/15/2012 1:36:54 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2559851.2	102.1	%	0.56				0.54%
ScR 361.383	333599.9	102.5	%	0.86				0.84%
Ag 328.068†	-22.5	-0.00014	mg/L	0.000084	-0.00014	mg/L	0.000084	61.98%
Al 308.215†	1.2	0.00071	mg/L	0.005357	0.00071	mg/L	0.005357	749.47%
As 188.979†	-0.8	-0.00042	mg/L	0.001684	-0.00042	mg/L	0.001684	400.52%
B 249.677†	6.7	0.00092	mg/L	0.000358	0.00092	mg/L	0.000358	39.01%
Ba 233.527†	0.8	0.00018	mg/L	0.000570	0.00018	mg/L	0.000570	312.08%
Be 313.042†	99.1	0.00016	mg/L	0.000027	0.00016	mg/L	0.000027	17.48%
Ca 317.933†	6.3	0.00048	mg/L	0.001459	0.00048	mg/L	0.001459	306.18%
Cd 228.802†	-1.0	-0.00003	mg/L	0.000215	-0.00003	mg/L	0.000215	711.64%
Co 228.616†	15.7	0.00048	mg/L	0.000285	0.00048	mg/L	0.000285	59.37%
Cr 267.716†	0.8	0.00014	mg/L	0.000993	0.00014	mg/L	0.000993	719.36%
Cu 324.752†	-97.7	-0.00041	mg/L	0.000137	-0.00041	mg/L	0.000137	33.62%
Fe 273.955†	7.3	0.00597	mg/L	0.000820	0.00597	mg/L	0.000820	13.75%
K 766.490†	-40.9	-0.02185	mg/L	0.016225	-0.02185	mg/L	0.016225	74.25%
Mg 279.077†	5.7	0.00411	mg/L	0.004749	0.00411	mg/L	0.004749	115.68%
Mn 257.610†	12.9	0.00038	mg/L	0.000082	0.00038	mg/L	0.000082	21.47%
Mo 202.031†	11.5	0.00061	mg/L	0.000402	0.00061	mg/L	0.000402	66.29%
Na 589.592†	12.5	0.00105	mg/L	0.004040	0.00105	mg/L	0.004040	385.71%
Na 330.237†	0.1	0.00490	mg/L	0.321088	0.00490	mg/L	0.321088	>999.9%
Ni 231.604†	-4.1	-0.00107	mg/L	0.001648	-0.00107	mg/L	0.001648	154.70%
Pb 220.353†	3.3	0.00044	mg/L	0.000581	0.00044	mg/L	0.000581	132.99%
Sb 206.836†	11.1	0.00358	mg/L	0.000717	0.00358	mg/L	0.000717	20.05%
Se 196.026†	-1.7	-0.00121	mg/L	0.003038	-0.00121	mg/L	0.003038	250.21%
Si 288.158†	0.9	0.00047	mg/L	0.005094	0.00047	mg/L	0.005094	>999.9%
Sn 189.927†	-0.7	-0.00018	mg/L	0.000316	-0.00018	mg/L	0.000316	172.37%
Sr 421.552†	171.4	0.00020	mg/L	0.000040	0.00020	mg/L	0.000040	20.48%
Ti 334.903†	17.3	0.00089	mg/L	0.000925	0.00089	mg/L	0.000925	104.35%
Tl 190.801†	1.9	0.00078	mg/L	0.001745	0.00078	mg/L	0.001745	223.06%
V 292.402†	1.6	0.00001	mg/L	0.000107	0.00001	mg/L	0.000107	815.37%
Zn 206.200†	1.6	0.00043	mg/L	0.000390	0.00043	mg/L	0.000390	91.07%

Sequence No.: 13
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/15/2012 1:41:10 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589421.5	103.3	%	0.22				0.21%
ScR 361.383	332059.3	102.1	%	0.88				0.86%
Ag 328.068†	460.3	0.00276	mg/L	0.000153	0.00276	mg/L	0.000153	5.52%
Al 308.215†	86.2	0.05087	mg/L	0.004687	0.05087	mg/L	0.004687	9.21%
As 188.979†	90.0	0.05111	mg/L	0.000978	0.05111	mg/L	0.000978	1.91%
B 249.677†	143.5	0.01961	mg/L	0.000560	0.01961	mg/L	0.000560	2.86%
Ba 233.527†	8.2	0.00191	mg/L	0.000542	0.00191	mg/L	0.000542	28.32%
Be 313.042†	665.9	0.00105	mg/L	0.000061	0.00105	mg/L	0.000061	5.81%
Ca 317.933†	669.2	0.05024	mg/L	0.001760	0.05024	mg/L	0.001760	3.50%
Cd 228.802†	65.2	0.00186	mg/L	0.000198	0.00186	mg/L	0.000198	10.67%
Co 228.616†	126.4	0.00387	mg/L	0.000154	0.00387	mg/L	0.000154	3.98%
Cr 267.716†	27.9	0.00478	mg/L	0.000520	0.00478	mg/L	0.000520	10.87%
Cu 324.752†	352.9	0.00147	mg/L	0.000034	0.00147	mg/L	0.000034	2.32%
Fe 273.955†	70.6	0.05787	mg/L	0.002137	0.05787	mg/L	0.002137	3.69%
K 766.490†	935.4	0.4999	mg/L	0.01029	0.4999	mg/L	0.01029	2.06%
Mg 279.077†	75.4	0.05400	mg/L	0.010253	0.05400	mg/L	0.010253	18.99%
Mn 257.610†	41.9	0.00124	mg/L	0.000110	0.00124	mg/L	0.000110	8.89%
Mo 202.031†	103.4	0.00545	mg/L	0.000151	0.00545	mg/L	0.000151	2.77%
Na 589.592†	5617.5	0.4698	mg/L	0.00460	0.4698	mg/L	0.00460	0.98%
Na 330.237†	8.8	0.3202	mg/L	0.09222	0.3202	mg/L	0.09222	28.80%
Ni 231.604†	36.5	0.00952	mg/L	0.001086	0.00952	mg/L	0.001086	11.40%
Pb 220.353†	160.5	0.02105	mg/L	0.000642	0.02105	mg/L	0.000642	3.05%
Sb 206.836†	167.0	0.05401	mg/L	0.000723	0.05401	mg/L	0.000723	1.34%
Se 196.026†	63.2	0.04536	mg/L	0.005217	0.04536	mg/L	0.005217	11.50%
Si 288.158†	130.1	0.06421	mg/L	0.004602	0.06421	mg/L	0.004602	7.17%
Sn 189.927†	39.1	0.01069	mg/L	0.000570	0.01069	mg/L	0.000570	5.33%
Sr 421.552†	930.0	0.00106	mg/L	0.000054	0.00106	mg/L	0.000054	5.09%
Ti 334.903†	106.5	0.00546	mg/L	0.000262	0.00546	mg/L	0.000262	4.80%
Tl 190.801†	113.4	0.04721	mg/L	0.000782	0.04721	mg/L	0.000782	1.66%
V 292.402†	377.4	0.00311	mg/L	0.000141	0.00311	mg/L	0.000141	4.54%
Zn 206.200†	40.1	0.01060	mg/L	0.000413	0.01060	mg/L	0.000413	3.90%

Sequence No.: 14
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/15/2012 1:45:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541872.1	101.4	%	0.85				0.84%
ScR 361.383	327819.7	100.8	%	1.36				1.35%
Ag 328.068†	-218.5	-0.00131	mg/L	0.000086	-0.00131	mg/L	0.000086	6.59%
Al 308.215†	331855.8	196.5	mg/L	2.07	196.5	mg/L	2.07	1.06%
As 188.979†	38.2	0.01603	mg/L	0.000360	0.01603	mg/L	0.000360	2.25%
B 249.677†	-17.8	-0.00244	mg/L	0.000907	-0.00244	mg/L	0.000907	37.18%
Ba 233.527†	134.8	-0.00094	mg/L	0.000659	-0.00094	mg/L	0.000659	70.09%
Be 313.042†	67.4	0.00010	mg/L	0.000009	0.00010	mg/L	0.000009	8.92%
Ca 317.933†	1331561.5	99.97	mg/L	1.198	99.97	mg/L	1.198	1.20%
Cd 228.802†	54.7	-0.00021	mg/L	0.000171	-0.00021	mg/L	0.000171	80.69%
Co 228.616†	83.5	-0.00005	mg/L	0.000284	-0.00005	mg/L	0.000284	625.91%
Cr 267.716†	8.7	-0.00059	mg/L	0.000734	-0.00059	mg/L	0.000734	123.93%
Cu 324.752†	-2101.7	-0.00078	mg/L	0.000237	-0.00078	mg/L	0.000237	30.29%
Fe 273.955†	243579.2	199.8	mg/L	2.36	199.8	mg/L	2.36	1.18%
K 766.490†	-7.0	-0.00373	mg/L	0.016706	-0.00373	mg/L	0.016706	447.37%
Mg 279.077†	145578.0	104.2	mg/L	1.92	104.2	mg/L	1.92	1.85%
Mn 257.610†	28.2	0.00084	mg/L	0.000426	0.00084	mg/L	0.000426	50.75%
Mo 202.031†	43.6	0.00122	mg/L	0.000227	0.00122	mg/L	0.000227	18.67%
Na 589.592†	72.4	0.00605	mg/L	0.002643	0.00605	mg/L	0.002643	43.66%
Na 330.237†	-0.4	-0.01288	mg/L	0.248403	-0.01288	mg/L	0.248403	>999.9%
Ni 231.604†	-4.7	-0.00121	mg/L	0.001180	-0.00121	mg/L	0.001180	97.77%
Pb 220.353†	-284.9	0.00148	mg/L	0.001402	0.00148	mg/L	0.001402	95.01%
Sb 206.836†	17.4	0.00548	mg/L	0.002891	0.00548	mg/L	0.002891	52.71%
Se 196.026†	21.3	0.01528	mg/L	0.005772	0.01528	mg/L	0.005772	37.76%
Si 288.158†	-35.7	-0.00500	mg/L	0.004948	-0.00500	mg/L	0.004948	99.01%
Sn 189.927†	-73.0	-0.00752	mg/L	0.000403	-0.00752	mg/L	0.000403	5.36%
Sr 421.552†	3470.0	0.00396	mg/L	0.000068	0.00396	mg/L	0.000068	1.71%
Ti 334.903†	133.6	0.00208	mg/L	0.000292	0.00208	mg/L	0.000292	14.03%
Tl 190.801†	-54.1	-0.00123	mg/L	0.001393	-0.00123	mg/L	0.001393	113.56%
V 292.402†	1521.8	0.00550	mg/L	0.000155	0.00550	mg/L	0.000155	2.83%
Zn 206.200†	14.9	0.00393	mg/L	0.000099	0.00393	mg/L	0.000099	2.51%

Sequence No.: 15
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/15/2012 1:49:44 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2530961.6	100.9	%	0.34				0.33%
ScR 361.383	329319.7	101.2	%	1.52				1.50%
Ag 328.068†	166862.2	1.002	mg/L	0.0066	1.002	mg/L	0.0066	0.66%
Al 308.215†	334769.0	198.2	mg/L	3.54	198.2	mg/L	3.54	1.78%
As 188.979†	1807.7	1.017	mg/L	0.0044	1.017	mg/L	0.0044	0.43%
B 249.677†	3.2	-0.00167	mg/L	0.001704	-0.00167	mg/L	0.001704	102.07%
Ba 233.527†	4477.7	1.021	mg/L	0.0167	1.021	mg/L	0.0167	1.63%
Be 313.042†	623368.4	0.9858	mg/L	0.01758	0.9858	mg/L	0.01758	1.78%
Ca 317.933†	1364418.7	102.4	mg/L	1.95	102.4	mg/L	1.95	1.90%
Cd 228.802†	31795.5	1.058	mg/L	0.0036	1.058	mg/L	0.0036	0.34%
Co 228.616†	33338.8	1.023	mg/L	0.0024	1.023	mg/L	0.0024	0.24%
Cr 267.716†	6121.4	1.047	mg/L	0.0164	1.047	mg/L	0.0164	1.57%
Cu 324.752†	255422.7	1.070	mg/L	0.0063	1.070	mg/L	0.0063	0.59%
Fe 273.955†	249900.7	204.9	mg/L	3.46	204.9	mg/L	3.46	1.69%
K 766.490†	-100.3	-0.05360	mg/L	0.032207	-0.05360	mg/L	0.032207	60.09%
Mg 279.077†	141378.8	101.2	mg/L	1.83	101.2	mg/L	1.83	1.81%
Mn 257.610†	34397.3	1.015	mg/L	0.0164	1.015	mg/L	0.0164	1.61%
Mo 202.031†	45.2	0.00122	mg/L	0.000333	0.00122	mg/L	0.000333	27.42%
Na 589.592†	242.2	0.02025	mg/L	0.001721	0.02025	mg/L	0.001721	8.49%
Na 330.237†	9.2	0.01956	mg/L	0.049198	0.01956	mg/L	0.049198	251.46%
Ni 231.604†	3683.4	0.9603	mg/L	0.01565	0.9603	mg/L	0.01565	1.63%
Pb 220.353†	7065.9	0.9654	mg/L	0.00294	0.9654	mg/L	0.00294	0.30%
Sb 206.836†	3200.6	1.023	mg/L	0.0032	1.023	mg/L	0.0032	0.31%
Se 196.026†	1399.9	1.004	mg/L	0.0011	1.004	mg/L	0.0011	0.11%
Si 288.158†	-38.7	-0.00301	mg/L	0.002340	-0.00301	mg/L	0.002340	77.63%
Sn 189.927†	-72.1	-0.00648	mg/L	0.000841	-0.00648	mg/L	0.000841	12.97%
Sr 421.552†	3496.3	0.00399	mg/L	0.000093	0.00399	mg/L	0.000093	2.33%
Ti 334.903†	132.8	0.00172	mg/L	0.000463	0.00172	mg/L	0.000463	26.95%
Tl 190.801†	2184.9	0.9220	mg/L	0.00291	0.9220	mg/L	0.00291	0.32%
V 292.402†	124458.0	1.018	mg/L	0.0034	1.018	mg/L	0.0034	0.33%
Zn 206.200†	3684.0	0.9733	mg/L	0.01605	0.9733	mg/L	0.01605	1.65%

Sequence No.: 16
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 11/15/2012 1:53:48 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631160.7	104.9	%	0.72				0.69%
ScR 361.383	333736.6	102.6	%	1.60				1.56%
Ag 328.068†	157764.2	0.9476	mg/L	0.00239	0.9476	mg/L	0.00239	0.25%
Al 308.215†	3510.1	2.044	mg/L	0.0431	2.044	mg/L	0.0431	2.11%
As 188.979†	3486.8	2.000	mg/L	0.0093	2.000	mg/L	0.0093	0.47%
B 249.677†	7153.5	0.9766	mg/L	0.01796	0.9766	mg/L	0.01796	1.84%
Ba 233.527†	4380.7	1.032	mg/L	0.0197	1.032	mg/L	0.0197	1.91%
Be 313.042†	610117.8	0.9648	mg/L	0.01118	0.9648	mg/L	0.01118	1.16%
Ca 317.933†	26530.4	1.992	mg/L	0.0246	1.992	mg/L	0.0246	1.23%
Cd 228.802†	31458.8	1.043	mg/L	0.0040	1.043	mg/L	0.0040	0.38%
Co 228.616†	33390.0	1.025	mg/L	0.0041	1.025	mg/L	0.0041	0.40%
Cr 267.716†	6135.9	1.051	mg/L	0.0175	1.051	mg/L	0.0175	1.66%
Cu 324.752†	242153.7	1.006	mg/L	0.0014	1.006	mg/L	0.0014	0.14%
Fe 273.955†	2651.6	2.168	mg/L	0.0400	2.168	mg/L	0.0400	1.84%
K 766.490†	37450.8	20.02	mg/L	0.247	20.02	mg/L	0.247	1.23%
Mg 279.077†	2894.2	2.080	mg/L	0.0422	2.080	mg/L	0.0422	2.03%
Mn 257.610†	34647.8	1.023	mg/L	0.0136	1.023	mg/L	0.0136	1.33%
Mo 202.031†	19442.4	1.025	mg/L	0.0055	1.025	mg/L	0.0055	0.54%
Na 589.592†	586991.8	49.10	mg/L	0.661	49.10	mg/L	0.661	1.35%
Na 330.237†	1423.9	52.18	mg/L	0.659	52.18	mg/L	0.659	1.26%
Ni 231.604†	3792.2	0.9888	mg/L	0.01597	0.9888	mg/L	0.01597	1.61%
Pb 220.353†	15113.1	1.981	mg/L	0.0113	1.981	mg/L	0.0113	0.57%
Sb 206.836†	6508.6	2.102	mg/L	0.0135	2.102	mg/L	0.0135	0.64%
Se 196.026†	2742.6	1.969	mg/L	0.0128	1.969	mg/L	0.0128	0.65%
Si 288.158†	4292.1	2.119	mg/L	0.0491	2.119	mg/L	0.0491	2.32%
Sn 189.927†	3788.8	1.034	mg/L	0.0047	1.034	mg/L	0.0047	0.45%
Sr 421.552†	848001.7	0.9667	mg/L	0.01323	0.9667	mg/L	0.01323	1.37%
Ti 334.903†	20178.2	1.035	mg/L	0.0133	1.035	mg/L	0.0133	1.29%
Tl 190.801†	4670.0	1.936	mg/L	0.0105	1.936	mg/L	0.0105	0.54%
V 292.402†	122790.6	1.011	mg/L	0.0029	1.011	mg/L	0.0029	0.28%
Zn 206.200†	3940.7	1.041	mg/L	0.0187	1.041	mg/L	0.0187	1.80%

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Sequence No.: 17
Sample ID: CB 7
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 1:58:41 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2598309.3	103.6	%	0.39				0.38%
ScR 361.383	332820.6	102.3	%	1.59				1.55%
Ag 328.068†	-43.5	-0.00026	mg/L	0.000292	-0.00026	mg/L	0.000292	111.82%
Al 308.215†	13.6	0.00802	mg/L	0.006404	0.00802	mg/L	0.006404	79.85%
As 188.979†	3.1	0.00180	mg/L	0.002055	0.00180	mg/L	0.002055	114.02%
B 249.677†	10.6	0.00144	mg/L	0.001157	0.00144	mg/L	0.001157	80.08%
Ba 233.527†	-0.8	-0.00020	mg/L	0.000110	-0.00020	mg/L	0.000110	56.08%
Be 313.042†	92.0	0.00015	mg/L	0.000092	0.00015	mg/L	0.000092	63.44%
Ca 317.933†	-5.1	-0.00038	mg/L	0.000262	-0.00038	mg/L	0.000262	68.25%
Cd 228.802†	-6.5	-0.00023	mg/L	0.000098	-0.00023	mg/L	0.000098	42.57%
Co 228.616†	12.7	0.00039	mg/L	0.000073	0.00039	mg/L	0.000073	18.74%
Cr 267.716†	0.2	0.00003	mg/L	0.000294	0.00003	mg/L	0.000294	916.67%
Cu 324.752†	-140.3	-0.00058	mg/L	0.000039	-0.00058	mg/L	0.000039	6.73%
Fe 273.955†	6.4	0.00527	mg/L	0.001331	0.00527	mg/L	0.001331	25.26%
K 766.490†	-9.4	-0.00500	mg/L	0.008646	-0.00500	mg/L	0.008646	172.80%
Mg 279.077†	9.4	0.00672	mg/L	0.003754	0.00672	mg/L	0.003754	55.84%
Mn 257.610†	0.4	0.00001	mg/L	0.000029	0.00001	mg/L	0.000029	279.28%
Mo 202.031†	9.8	0.00052	mg/L	0.000186	0.00052	mg/L	0.000186	36.03%
Na 589.592†	11.6	0.00097	mg/L	0.001463	0.00097	mg/L	0.001463	150.89%
Na 330.237†	0.5	0.01764	mg/L	0.464143	0.01764	mg/L	0.464143	>999.9%
Ni 231.604†	0.9	0.00023	mg/L	0.000683	0.00023	mg/L	0.000683	301.45%
Pb 220.353†	3.4	0.00045	mg/L	0.000568	0.00045	mg/L	0.000568	126.42%
Sb 206.836†	12.3	0.00397	mg/L	0.001304	0.00397	mg/L	0.001304	32.83%
Se 196.026†	0.7	0.00047	mg/L	0.000795	0.00047	mg/L	0.000795	167.77%
Si 288.158†	-4.6	-0.00229	mg/L	0.001650	-0.00229	mg/L	0.001650	72.01%
Sn 189.927†	-0.5	-0.00013	mg/L	0.000511	-0.00013	mg/L	0.000511	399.34%
Sr 421.552†	155.9	0.00018	mg/L	0.000070	0.00018	mg/L	0.000070	39.27%
Ti 334.903†	14.9	0.00076	mg/L	0.000326	0.00076	mg/L	0.000326	42.65%
Tl 190.801†	0.6	0.00025	mg/L	0.003008	0.00025	mg/L	0.003008	>999.9%
V 292.402†	2.7	0.00002	mg/L	0.000150	0.00002	mg/L	0.000150	686.91%
Zn 206.200†	1.6	0.00043	mg/L	0.000635	0.00043	mg/L	0.000635	147.34%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-16-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Insufficient volume
		3			2991-5
		4			-6
		5			-7
		2			-4
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VR30 B	SWC	5	
		D			
		E			
		F			
		G			
		H			
		CCV2			
		CCB2			
		VR32 A-L	SWC	25 ✓	
		A		5	
		ADUP		✓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 2 of 6

All corrections made by analyst unless otherwise noted. BA 11-16-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR32 ASPK	SWC	5 ✓	Al Ba Fe Mn STL
		~~APOST~~			(0.08 mL ICP Spike 2977-9) ✓ M11-20
		L			
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End VR30, 32
—	✓	VR34 MBI	SWC	2	
	✓	B		5	
	✓	C			
	✓	D			
	✓	~~AL~~		25	
	✓	A	BA	5 11/20/12	
	✓	ADUP			
	✓	ASPK			
	✓	~~APOST~~			0.08 mL ICP Spike 2977-9
	✓	MBISPK		2	
		CCV5			Ba, Cr, Fe, Mg, Na, Si ↑ 330
		CCB5			↓ ~35 min delay
		CCV6			
		CCB6			

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-16-12

ICP-2	Analyst BA 11-20-12	Peer H 11-20	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See log
Internal Standards	✓	✓	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See log - VR34, VR33
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	See log - VR36
Data Distributions:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	~~CAF - VR34, VR33~~ A.N. - VR33, VR36

Analysis Begun

Start Time: 11/16/2012 8:40:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/16/2012 8:40:14 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2257192.3	5062.38	0.22%	100.0	%
ScR 361.383	285929.2	1391.38	0.49%	100.0	%
Ag 328.068†	-156.2	13.31	8.52%	[0.00]	mg/L
Al 308.215†	147.1	12.17	8.28%	[0.00]	mg/L
As 188.979†	-9.5	1.63	17.14%	[0.00]	mg/L
B 249.677†	40.2	10.66	26.54%	[0.00]	mg/L
Ba 233.527†	19.9	6.07	30.52%	[0.00]	mg/L
Be 313.042†	905.1	35.52	3.92%	[0.00]	mg/L
Ca 317.933†	161.6	10.52	6.51%	[0.00]	mg/L
Cd 228.802†	303.7	1.47	0.48%	[0.00]	mg/L
Co 228.616†	-63.9	0.59	0.92%	[0.00]	mg/L
Cr 267.716†	-81.8	5.34	6.52%	[0.00]	mg/L
Cu 324.752†	2486.2	26.59	1.07%	[0.00]	mg/L
Fe 273.955†	14.2	2.43	17.08%	[0.00]	mg/L
K 766.490†	498.6	23.15	4.64%	[0.00]	mg/L
Mg 279.077†	83.4	7.46	8.95%	[0.00]	mg/L
Mn 257.610†	157.9	1.11	0.71%	[0.00]	mg/L
Mo 202.031†	66.0	0.64	0.97%	[0.00]	mg/L
Na 589.592†	-326.9	3.37	1.03%	[0.00]	mg/L
Na 330.237†	-205.1	3.78	1.84%	[0.00]	mg/L
Ni 231.604†	-23.4	4.31	18.37%	[0.00]	mg/L
Pb 220.353†	62.2	0.92	1.47%	[0.00]	mg/L
Sb 206.836†	64.7	1.51	2.33%	[0.00]	mg/L
Se 196.026†	-53.9	5.80	10.77%	[0.00]	mg/L
Si 288.158†	61.1	6.41	10.48%	[0.00]	mg/L
Sn 189.927†	0.6	3.59	648.11%	[0.00]	mg/L
Sr 421.552†	398.0	32.76	8.23%	[0.00]	mg/L
Ti 334.903†	-53.4	5.15	9.65%	[0.00]	mg/L
Tl 190.801†	-42.6	0.94	2.21%	[0.00]	mg/L
V 292.402†	180.2	30.85	17.12%	[0.00]	mg/L
Zn 206.200†	26.6	1.80	6.77%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 11/16/2012 8:44:35 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	5162065.8	309107.01	5.99%	228.7	%
ScR 361.383	753266.5	90956.28	12.07%	263.4	%
Ba 233.527†	1874.1	1447.51	77.24%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cd 228.802†	33927.3	6109.66	18.01%	[10]	mg/L
Co 228.616†	36364.7	6783.73	18.65%	[10]	mg/L
Cr 267.716†	2462.0	1761.76	71.56%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cu 324.752†	249596.2	35377.75	14.17%	[10]	mg/L
Saturated within auto integration window (code 4)					
Mn 257.610†	3225.8	1401.70	43.45%	[10]	mg/L
Saturated within auto integration window (code 4)					
V 292.402†	138697.0	25356.30	18.28%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/16/2012 8:47:36 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2240434.6	11749.05	0.52%	99.26	%
ScR 361.383	278574.0	2167.99	0.78%	97.43	%
Ag 328.068†	176715.6	981.09	0.56%	[1.0]	mg/L
As 188.979†	18889.0	102.99	0.55%	[10]	mg/L
B 249.677†	78359.9	959.17	1.22%	[10]	mg/L
Be 313.042†	3325157.8	9039.91	0.27%	[5.0]	mg/L
Na 589.592†	637056.8	3225.78	0.51%	[50]	mg/L
Ni 231.604†	41213.5	479.43	1.16%	[10]	mg/L
Pb 220.353†	80014.5	352.48	0.44%	[10]	mg/L
Se 196.026†	14888.7	66.03	0.44%	[10]	mg/L
Sr 421.552†	4683748.6	13846.00	0.30%	[5]	mg/L
Tl 190.801†	25566.5	125.79	0.49%	[10]	mg/L
Zn 206.200†	40539.2	432.89	1.07%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/16/2012 8:50:10 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2284080.4	20514.72	0.90%	101.2	%
ScR 361.383	287209.0	4271.56	1.49%	100.4	%
Mo 202.031†	200666.8	1788.12	0.89%	[10]	mg/L
Sb 206.836†	32698.0	176.84	0.54%	[10]	mg/L
Si 288.158†	21523.3	356.61	1.66%	[10]	mg/L
Sn 189.927†	38978.7	378.05	0.97%	[10]	mg/L
Ti 334.903†	208410.1	4234.27	2.03%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/16/2012 8:52:25 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2129515.1	15926.23	0.75%	94.34	%
ScR 361.383	283261.8	4479.15	1.58%	99.07	%
Al 308.215†	53425.5	1062.08	1.99%	[30]	mg/L
Ca 317.933†	426118.0	3161.77	0.74%	[30]	mg/L
Fe 273.955†	131112.8	857.59	0.65%	[100]	mg/L
K 766.490†	199317.4	2014.88	1.01%	[100]	mg/L
Mg 279.077†	44239.4	880.98	1.99%	[30]	mg/L
Na 330.237†	2873.6	54.15	1.88%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	176700	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1781	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1889	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7836	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	187.4	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	665000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14200	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	3393	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	3636	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	246.2	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	24960	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1311	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1993	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1475	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	322.6	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20070	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12740	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.74	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4121	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8001	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3270	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1489	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2152	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3898	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	936700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	20840	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2557	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	13870	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4054	0.00000	1.000000	

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Analysis Begun

Start Time: 11/16/2012 9:03:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: STD2
Date Collected: 11/16/2012 9:03:34 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2234101.3	25048.88	1.12%	98.98	%
ScR 361.383	281040.0	8376.44	2.98%	98.29	%
Ba 233.527†	45364.6	2015.40	4.44%	[10]	mg/L
Cd 228.802†	316786.9	4140.20	1.31%	[10]	mg/L
Co 228.616†	352595.3	5111.49	1.45%	[10]	mg/L
Cr 267.716†	62110.4	2667.07	4.29%	[10]	mg/L
Cu 324.752†	2600465.7	38628.72	1.49%	[10]	mg/L
Mn 257.610†	361794.3	15460.11	4.27%	[10]	mg/L
V 292.402†	1309618.0	17838.14	1.36%	[10]	mg/L

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Analysis Begun

Start Time: 11/16/2012 9:05:19 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 11/16/2012 9:05:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209684.8	97.90	%	0.341				0.35%
ScR 361.383	282108.1	98.66	%	1.030				1.04%
Ag 328.068†	171195.3	0.9690	mg/L	0.00334	0.9690	mg/L	0.00334	0.34%
Al 308.215†	3611.7	1.994	mg/L	0.0285	1.994	mg/L	0.0285	1.43%
As 188.979†	3613.4	1.937	mg/L	0.0091	1.937	mg/L	0.0091	0.47%
B 249.677†	7493.5	0.9554	mg/L	0.00947	0.9554	mg/L	0.00947	0.99%
Ba 233.527†	4623.1	1.019	mg/L	0.0129	1.019	mg/L	0.0129	1.27%
Be 313.042†	622301.4	0.9355	mg/L	0.01462	0.9355	mg/L	0.01462	1.56%
Ca 317.933†	27114.7	1.909	mg/L	0.0255	1.909	mg/L	0.0255	1.34%
Cd 228.802†	32872.5	1.026	mg/L	0.0051	1.026	mg/L	0.0051	0.50%
Co 228.616†	36272.9	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Cr 267.716†	6298.6	1.014	mg/L	0.0094	1.014	mg/L	0.0094	0.93%
Cu 324.752†	260661.1	1.002	mg/L	0.0035	1.002	mg/L	0.0035	0.35%
Fe 273.955†	2632.3	2.001	mg/L	0.0211	2.001	mg/L	0.0211	1.06%
K 766.490†	39267.6	19.70	mg/L	0.308	19.70	mg/L	0.308	1.56%
Mg 279.077†	2926.1	1.992	mg/L	0.0206	1.992	mg/L	0.0206	1.04%
Mn 257.610†	35565.1	0.9834	mg/L	0.01313	0.9834	mg/L	0.01313	1.33%
Mo 202.031†	20424.2	1.018	mg/L	0.0045	1.018	mg/L	0.0045	0.44%
Na 589.592†	619490.6	48.62	mg/L	0.591	48.62	mg/L	0.591	1.22%
Na 330.237†	1485.5	51.60	mg/L	0.574	51.60	mg/L	0.574	1.11%
Ni 231.604†	3941.7	0.9567	mg/L	0.00964	0.9567	mg/L	0.00964	1.01%
Pb 220.353†	15806.7	1.977	mg/L	0.0055	1.977	mg/L	0.0055	0.28%
Sb 206.836†	6859.5	2.097	mg/L	0.0069	2.097	mg/L	0.0069	0.33%
Se 196.026†	2843.4	1.909	mg/L	0.0148	1.909	mg/L	0.0148	0.77%
Si 288.158†	4441.4	2.063	mg/L	0.0250	2.063	mg/L	0.0250	1.21%
Sn 189.927†	3882.0	0.9973	mg/L	0.00242	0.9973	mg/L	0.00242	0.24%
Sr 421.552†	889172.4	0.9492	mg/L	0.01240	0.9492	mg/L	0.01240	1.31%
Ti 334.903†	20989.1	1.006	mg/L	0.0138	1.006	mg/L	0.0138	1.37%
Tl 190.801†	4946.7	1.927	mg/L	0.0082	1.927	mg/L	0.0082	0.42%
V 292.402†	130561.3	1.001	mg/L	0.0042	1.001	mg/L	0.0042	0.42%
Zn 206.200†	3966.6	0.9782	mg/L	0.01019	0.9782	mg/L	0.01019	1.04%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/16/2012 9:09:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2196753.1	97.32	%	0.645				0.66%
ScR 361.383	277079.3	96.90	%	0.596				0.62%
Ag 328.068†	25.3	0.00014	mg/L	0.000119	0.00014	mg/L	0.000119	83.25%
Al 308.215†	11.8	0.00663	mg/L	0.004874	0.00663	mg/L	0.004874	73.52%
As 188.979†	-2.4	-0.00130	mg/L	0.000877	-0.00130	mg/L	0.000877	67.73%
B 249.677†	20.4	0.00260	mg/L	0.000693	0.00260	mg/L	0.000693	26.66%
Ba 233.527†	-1.6	-0.00036	mg/L	0.000345	-0.00036	mg/L	0.000345	96.09%
Be 313.042†	140.9	0.00021	mg/L	0.000063	0.00021	mg/L	0.000063	29.60%
Ca 317.933†	4.1	0.00029	mg/L	0.000613	0.00029	mg/L	0.000613	209.76%
Cd 228.802†	-4.1	-0.00012	mg/L	0.000133	-0.00012	mg/L	0.000133	109.62%
Co 228.616†	-13.1	-0.00037	mg/L	0.000080	-0.00037	mg/L	0.000080	21.59%
Cr 267.716†	-1.9	-0.00030	mg/L	0.000789	-0.00030	mg/L	0.000789	263.58%
Cu 324.752†	73.5	0.00028	mg/L	0.000129	0.00028	mg/L	0.000129	45.76%
Fe 273.955†	2.6	0.00199	mg/L	0.000852	0.00199	mg/L	0.000852	42.89%
K 766.490†	40.7	0.02043	mg/L	0.010112	0.02043	mg/L	0.010112	49.51%
Mg 279.077†	6.7	0.00456	mg/L	0.002283	0.00456	mg/L	0.002283	50.03%
Mn 257.610†	0.2	0.00001	mg/L	0.000163	0.00001	mg/L	0.000163	>999.9%
Mo 202.031†	20.7	0.00103	mg/L	0.000105	0.00103	mg/L	0.000105	10.18%
Na 589.592†	146.5	0.01150	mg/L	0.003439	0.01150	mg/L	0.003439	29.92%
Na 330.237†	-7.5	-0.2613	mg/L	0.47250	-0.2613	mg/L	0.47250	180.80%
Ni 231.604†	-8.7	-0.00212	mg/L	0.001223	-0.00212	mg/L	0.001223	57.68%
Pb 220.353†	3.0	0.00037	mg/L	0.000277	0.00037	mg/L	0.000277	75.11%
Sb 206.836†	7.4	0.00227	mg/L	0.001134	0.00227	mg/L	0.001134	49.84%
Se 196.026†	7.0	0.00472	mg/L	0.002402	0.00472	mg/L	0.002402	50.90%
Si 288.158†	3.5	0.00165	mg/L	0.002627	0.00165	mg/L	0.002627	159.46%
Sn 189.927†	-2.5	-0.00063	mg/L	0.000777	-0.00063	mg/L	0.000777	123.08%
Sr 421.552†	134.3	0.00014	mg/L	0.000071	0.00014	mg/L	0.000071	49.43%
Ti 334.903†	-3.6	-0.00017	mg/L	0.000923	-0.00017	mg/L	0.000923	527.60%
Tl 190.801†	-0.9	-0.00037	mg/L	0.001500	-0.00037	mg/L	0.001500	408.38%
V 292.402†	-13.9	-0.00011	mg/L	0.000253	-0.00011	mg/L	0.000253	236.98%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000096	-0.00012	mg/L	0.000096	80.81%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 9:13:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2216218.3	98.18	%	0.984				1.00%
ScR 361.383	282613.9	98.84	%	1.028				1.04%
Ag 328.068†	537.3	0.00304	mg/L	0.000179	0.00304	mg/L	0.000179	5.90%
Al 308.215†	108.1	0.06056	mg/L	0.008648	0.06056	mg/L	0.008648	14.28%
As 188.979†	87.4	0.04638	mg/L	0.000615	0.04638	mg/L	0.000615	1.33%
B 249.677†	161.3	0.02058	mg/L	0.000219	0.02058	mg/L	0.000219	1.07%
Ba 233.527†	10.4	0.00228	mg/L	0.001457	0.00228	mg/L	0.001457	64.02%
Be 313.042†	676.8	0.00102	mg/L	0.000033	0.00102	mg/L	0.000033	3.26%
Ca 317.933†	680.4	0.04791	mg/L	0.000586	0.04791	mg/L	0.000586	1.22%
Cd 228.802†	68.8	0.00187	mg/L	0.000023	0.00187	mg/L	0.000023	1.24%
Co 228.616†	104.8	0.00296	mg/L	0.000186	0.00296	mg/L	0.000186	6.27%
Cr 267.716†	27.8	0.00447	mg/L	0.000689	0.00447	mg/L	0.000689	15.42%
Cu 324.752†	541.8	0.00208	mg/L	0.000042	0.00208	mg/L	0.000042	2.04%
Fe 273.955†	70.8	0.05399	mg/L	0.001502	0.05399	mg/L	0.001502	2.78%
K 766.490†	998.9	0.5011	mg/L	0.00548	0.5011	mg/L	0.00548	1.09%
Mg 279.077†	80.8	0.05479	mg/L	0.002742	0.05479	mg/L	0.002742	5.00%
Mn 257.610†	31.1	0.00086	mg/L	0.000036	0.00086	mg/L	0.000036	4.23%
Mo 202.031†	104.7	0.00522	mg/L	0.000094	0.00522	mg/L	0.000094	1.80%
Na 589.592†	6003.1	0.4712	mg/L	0.00187	0.4712	mg/L	0.00187	0.40%
Na 330.237†	7.0	0.2434	mg/L	0.08368	0.2434	mg/L	0.08368	34.38%
Ni 231.604†	38.7	0.00941	mg/L	0.000812	0.00941	mg/L	0.000812	8.63%
Pb 220.353†	159.1	0.01990	mg/L	0.000201	0.01990	mg/L	0.000201	1.01%
Sb 206.836†	174.7	0.05345	mg/L	0.001079	0.05345	mg/L	0.001079	2.02%
Se 196.026†	76.9	0.05167	mg/L	0.002389	0.05167	mg/L	0.002389	4.62%
Si 288.158†	139.0	0.06454	mg/L	0.003275	0.06454	mg/L	0.003275	5.07%
Sn 189.927†	32.9	0.00847	mg/L	0.001308	0.00847	mg/L	0.001308	15.43%
Sr 421.552†	944.7	0.00101	mg/L	0.000032	0.00101	mg/L	0.000032	3.17%
Ti 334.903†	115.1	0.00551	mg/L	0.000574	0.00551	mg/L	0.000574	10.41%
Tl 190.801†	123.3	0.04819	mg/L	0.000503	0.04819	mg/L	0.000503	1.04%
V 292.402†	377.1	0.00290	mg/L	0.000117	0.00290	mg/L	0.000117	4.03%
Zn 206.200†	37.8	0.00931	mg/L	0.000286	0.00931	mg/L	0.000286	3.07%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 9:17:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190631.7	97.05	%	0.522				0.54%
ScR 361.383	272122.2	95.17	%	0.790				0.83%
Ag 328.068†	-126.8	-0.00071	mg/L	0.000216	-0.00071	mg/L	0.000216	30.24%
Al 308.215†	354369.7	199.0	mg/L	1.93	199.0	mg/L	1.93	0.97%
As 188.979†	37.4	0.01434	mg/L	0.004842	0.01434	mg/L	0.004842	33.76%
B 249.677†	-4.5	-0.00057	mg/L	0.001157	-0.00057	mg/L	0.001157	201.74%
Ba 233.527†	134.4	-0.00180	mg/L	0.001640	-0.00180	mg/L	0.001640	91.02%
Be 313.042†	120.9	0.00018	mg/L	0.000016	0.00018	mg/L	0.000016	8.99%
Ca 317.933†	1386218.1	97.59	mg/L	1.338	97.59	mg/L	1.338	1.37%
Cd 228.802†	52.6	-0.00030	mg/L	0.000127	-0.00030	mg/L	0.000127	42.56%
Co 228.616†	59.7	-0.00082	mg/L	0.000211	-0.00082	mg/L	0.000211	25.75%
Cr 267.716†	-0.1	-0.00223	mg/L	0.000855	-0.00223	mg/L	0.000855	38.27%
Cu 324.752†	-2019.9	-0.00015	mg/L	0.000123	-0.00015	mg/L	0.000123	83.50%
Fe 273.955†	251658.1	191.9	mg/L	1.82	191.9	mg/L	1.82	0.95%
K 766.490†	15.3	0.00769	mg/L	0.016333	0.00769	mg/L	0.016333	212.48%
Mg 279.077†	151274.0	102.5	mg/L	1.20	102.5	mg/L	1.20	1.17%
Mn 257.610†	20.7	0.00051	mg/L	0.000176	0.00051	mg/L	0.000176	34.16%
Mo 202.031†	46.0	0.00124	mg/L	0.000303	0.00124	mg/L	0.000303	24.42%
Na 589.592†	208.1	0.01633	mg/L	0.001390	0.01633	mg/L	0.001390	8.51%
Na 330.237†	-19.8	-0.6882	mg/L	0.05443	-0.6882	mg/L	0.05443	7.91%
Ni 231.604†	0.5	0.00013	mg/L	0.001338	0.00013	mg/L	0.001338	>999.9%
Pb 220.353†	-300.5	0.00217	mg/L	0.000584	0.00217	mg/L	0.000584	26.90%
Sb 206.836†	25.7	0.00772	mg/L	0.005252	0.00772	mg/L	0.005252	68.05%
Se 196.026†	25.1	0.01686	mg/L	0.002317	0.01686	mg/L	0.002317	13.74%
Si 288.158†	-30.2	-0.00162	mg/L	0.003162	-0.00162	mg/L	0.003162	195.03%
Sn 189.927†	-76.8	-0.00764	mg/L	0.001565	-0.00764	mg/L	0.001565	20.49%
Sr 421.552†	3622.8	0.00387	mg/L Conf.	0.000024	0.00387	mg/L	0.000024	0.61%
Ti 334.903†	152.9	0.00268	mg/L	0.000157	0.00268	mg/L	0.000157	5.86%
Tl 190.801†	-53.8	-0.00056	mg/L	0.002577	-0.00056	mg/L	0.002577	462.75%
V 292.402†	1360.9	0.00368	mg/L	0.000137	0.00368	mg/L	0.000137	3.73%
Zn 206.200†	16.8	0.00414	mg/L	0.000676	0.00414	mg/L	0.000676	16.33%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 9:22:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190888.4	97.06	%	0.945				0.97%
ScR 361.383	280553.1	98.12	%	1.630				1.66%
Ag 328.068†	174109.6	0.9855	mg/L	0.01251	0.9855	mg/L	0.01251	1.27%
Al 308.215†	345774.5	194.1	mg/L	3.64	194.1	mg/L	3.64	1.87%
As 188.979†	1856.0	0.9764	mg/L	0.00758	0.9764	mg/L	0.00758	0.78%
B 249.677†	4.4	-0.00148	mg/L	0.000384	-0.00148	mg/L	0.000384	25.84%
Ba 233.527†	4703.1	1.005	mg/L	0.0174	1.005	mg/L	0.0174	1.73%
Be 313.042†	621412.9	0.9342	mg/L	0.01515	0.9342	mg/L	0.01515	1.62%
Ca 317.933†	1384278.5	97.46	mg/L	1.849	97.46	mg/L	1.849	1.90%
Cd 228.802†	32640.6	1.023	mg/L	0.0103	1.023	mg/L	0.0103	1.01%
Co 228.616†	35083.8	0.9923	mg/L	0.00677	0.9923	mg/L	0.00677	0.68%
Cr 267.716†	6250.0	1.004	mg/L	0.0188	1.004	mg/L	0.0188	1.87%
Cu 324.752†	264088.7	1.023	mg/L	0.0118	1.023	mg/L	0.0118	1.15%
Fe 273.955†	250591.4	191.1	mg/L	3.79	191.1	mg/L	3.79	1.98%
K 766.490†	-57.9	-0.02907	mg/L	0.026894	-0.02907	mg/L	0.026894	92.50%
Mg 279.077†	144004.0	97.55	mg/L	1.854	97.55	mg/L	1.854	1.90%
Mn 257.610†	34625.5	0.9572	mg/L	0.01844	0.9572	mg/L	0.01844	1.93%
Mo 202.031†	39.2	0.00085	mg/L	0.000259	0.00085	mg/L	0.000259	30.55%
Na 589.592†	393.4	0.03087	mg/L	0.003439	0.03087	mg/L	0.003439	11.14%
Na 330.237†	-6.8	-0.5377	mg/L	0.12445	-0.5377	mg/L	0.12445	23.14%
Ni 231.604†	3861.8	0.9372	mg/L	0.01594	0.9372	mg/L	0.01594	1.70%
Pb 220.353†	7369.5	0.9602	mg/L	0.00787	0.9602	mg/L	0.00787	0.82%
Sb 206.836†	3346.2	1.013	mg/L	0.0073	1.013	mg/L	0.0073	0.72%
Se 196.026†	1441.3	0.9670	mg/L	0.00596	0.9670	mg/L	0.00596	0.62%
Si 288.158†	-35.4	-0.00092	mg/L	0.002202	-0.00092	mg/L	0.002202	238.98%
Sn 189.927†	-78.2	-0.00752	mg/L	0.001086	-0.00752	mg/L	0.001086	14.44%
Sr 421.552†	3451.0	0.00368	mg/L Conf.	0.000068	0.00368	mg/L	0.000068	1.83%
Ti 334.903†	142.2	0.00197	mg/L	0.000354	0.00197	mg/L	0.000354	17.98%
Tl 190.801†	2300.9	0.9111	mg/L	0.00358	0.9111	mg/L	0.00358	0.39%
V 292.402†	128370.6	0.9780	mg/L	0.01111	0.9780	mg/L	0.01111	1.14%
Zn 206.200†	3708.3	0.9147	mg/L	0.01559	0.9147	mg/L	0.01559	1.70%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/16/2012 9:26:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2252340.2	99.79	%	1.267				1.27%
ScR 361.383	280210.0	98.00	%	0.128				0.13%
Ag 328.068†	170394.8	0.9645	mg/L	0.01031	0.9645	mg/L	0.01031	1.07%
Al 308.215†	3796.5	2.098	mg/L	0.0465	2.098	mg/L	0.0465	2.22%
As 188.979†	3624.7	1.943	mg/L	0.0245	1.943	mg/L	0.0245	1.26%
B 249.677†	7600.7	0.9691	mg/L	0.00834	0.9691	mg/L	0.00834	0.86%
Ba 233.527†	4724.9	1.041	mg/L	0.0114	1.041	mg/L	0.0114	1.10%
Be 313.042†	624775.5	0.9393	mg/L	0.00408	0.9393	mg/L	0.00408	0.43%
Ca 317.933†	28107.5	1.979	mg/L	0.0536	1.979	mg/L	0.0536	2.71%
Cd 228.802†	32740.0	1.021	mg/L	0.0096	1.021	mg/L	0.0096	0.94%
Co 228.616†	36281.5	1.027	mg/L	0.0131	1.027	mg/L	0.0131	1.27%
Cr 267.716†	6427.3	1.034	mg/L	0.0105	1.034	mg/L	0.0105	1.01%
Cu 324.752†	257751.3	0.9908	mg/L	0.00855	0.9908	mg/L	0.00855	0.86%
Fe 273.955†	2794.7	2.125	mg/L	0.0446	2.125	mg/L	0.0446	2.10%
K 766.490†	39353.6	19.74	mg/L	0.168	19.74	mg/L	0.168	0.85%
Mg 279.077†	3061.6	2.083	mg/L	0.0247	2.083	mg/L	0.0247	1.19%
Mn 257.610†	35697.7	0.9871	mg/L	0.00445	0.9871	mg/L	0.00445	0.45%
Mo 202.031†	20351.2	1.014	mg/L	0.0141	1.014	mg/L	0.0141	1.39%
Na 589.592†	619955.6	48.66	mg/L	0.090	48.66	mg/L	0.090	0.18%
Na 330.237†	1493.2	51.86	mg/L	0.515	51.86	mg/L	0.515	0.99%
Ni 231.604†	4042.9	0.9813	mg/L	0.00733	0.9813	mg/L	0.00733	0.75%
Pb 220.353†	15832.2	1.980	mg/L	0.0261	1.980	mg/L	0.0261	1.32%
Sb 206.836†	6834.9	2.089	mg/L	0.0285	2.089	mg/L	0.0285	1.36%
Se 196.026†	2852.5	1.915	mg/L	0.0265	1.915	mg/L	0.0265	1.38%
Si 288.158†	4512.2	2.096	mg/L	0.0205	2.096	mg/L	0.0205	0.98%
Sn 189.927†	3879.2	0.9966	mg/L	0.01355	0.9966	mg/L	0.01355	1.36%
Sr 421.552†	887987.9	0.9479	mg/L	0.00441	0.9479	mg/L	0.00441	0.46%
Ti 334.903†	21042.2	1.008	mg/L	0.0048	1.008	mg/L	0.0048	0.48%
Tl 190.801†	4956.3	1.930	mg/L	0.0241	1.930	mg/L	0.0241	1.25%
V 292.402†	130347.7	0.9998	mg/L	0.00944	0.9998	mg/L	0.00944	0.94%
Zn 206.200†	4092.0	1.009	mg/L	0.0091	1.009	mg/L	0.0091	0.90%

Sequence No.: 7
Sample ID: CB \

Autosampler Location: 1
Date Collected: 11/16/2012 9:31:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2213341.6	98.06	%	0.553				0.56%
ScR 361.383	278537.1	97.41	%	0.507	.			0.52%
Ag 328.068†	10.1	0.00006	mg/L	0.000066	0.00006	mg/L	0.000066	115.23%
Al 308.215†	26.5	0.01485	mg/L	0.007996	0.01485	mg/L	0.007996	53.83%
As 188.979†	-1.6	-0.00086	mg/L	0.000829	-0.00086	mg/L	0.000829	96.37%
B 249.677†	12.2	0.00156	mg/L	0.000945	0.00156	mg/L	0.000945	60.64%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000465	-0.00043	mg/L	0.000465	108.94%
Be 313.042†	124.3	0.00019	mg/L	0.000018	0.00019	mg/L	0.000018	9.73%
Ca 317.933†	76.5	0.00539	mg/L	0.000861	0.00539	mg/L	0.000861	15.99%
Cd 228.802†	-1.5	-0.00004	mg/L	0.000172	-0.00004	mg/L	0.000172	411.16%
Co 228.616†	-18.7	-0.00053	mg/L	0.000066	-0.00053	mg/L	0.000066	12.48%
Cr 267.716†	-10.8	-0.00174	mg/L	0.000634	-0.00174	mg/L	0.000634	36.45%
Cu 324.752†	58.6	0.00023	mg/L	0.000092	0.00023	mg/L	0.000092	40.94%
Fe 273.955†	13.0	0.00995	mg/L	0.000573	0.00995	mg/L	0.000573	5.76%
K 766.490†	16.7	0.00837	mg/L	0.009145	0.00837	mg/L	0.009145	109.22%
Mg 279.077†	12.3	0.00835	mg/L	0.003074	0.00835	mg/L	0.003074	36.82%
Mn 257.610†	-2.6	-0.00007	mg/L	0.000109	-0.00007	mg/L	0.000109	153.26%
Mo 202.031†	18.0	0.00090	mg/L	0.000213	0.00090	mg/L	0.000213	23.74%
Na 589.592†	82.8	0.00650	mg/L	0.004130	0.00650	mg/L	0.004130	63.56%
Na 330.237†	-17.5	-0.6092	mg/L	0.11089	-0.6092	mg/L	0.11089	18.20%
Ni 231.604†	0.3	0.00009	mg/L	0.001926	0.00009	mg/L	0.001926	>999.9%
Pb 220.353†	3.0	0.00038	mg/L	0.001361	0.00038	mg/L	0.001361	359.60%
Sb 206.836†	12.0	0.00368	mg/L	0.000378	0.00368	mg/L	0.000378	10.29%
Se 196.026†	3.9	0.00260	mg/L	0.005079	0.00260	mg/L	0.005079	195.50%
Si 288.158†	0.1	0.00007	mg/L	0.002269	0.00007	mg/L	0.002269	>999.9%
Sn 189.927†	-3.1	-0.00079	mg/L	0.000775	-0.00079	mg/L	0.000775	98.02%
Sr 421.552†	93.8	0.00010	mg/L	0.000004	0.00010	mg/L	0.000004	4.49%
Ti 334.903†	8.6	0.00041	mg/L	0.000041	0.00041	mg/L	0.000041	9.99%
Tl 190.801†	1.1	0.00045	mg/L	0.001014	0.00045	mg/L	0.001014	224.76%
V 292.402†	-22.4	-0.00018	mg/L	0.000205	-0.00018	mg/L	0.000205	114.77%
Zn 206.200†	2.4	0.00060	mg/L	0.000874	0.00060	mg/L	0.000874	145.52%

Sequence No.: 8
Sample ID: VR30 B SWC

Autosampler Location: 304
Date Collected: 11/16/2012 9:36:01 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2266905.1	100.4	%	0.27				0.27%
ScR 361.383	289782.5	101.3	%	1.06				1.04%
Ag 328.068†	-170.5	-0.00091	mg/L	0.000144	-0.00456	mg/L	0.000721	15.82%
Al 308.215†	162648.8	91.33	mg/L	0.923	456.6	mg/L	4.61	1.01%
As 188.979†	43.3	0.06856	mg/L	0.000959	0.3428	mg/L	0.00479	1.40%
B 249.677†	34.4	0.00426	mg/L	0.001057	0.02132	mg/L	0.005286	24.80%
Ba 233.527†	19790.3	4.337	mg/L	0.0357	21.68	mg/L	0.179	0.82%
Be 313.042†	3080.4	0.00458	mg/L	0.000094	0.02288	mg/L	0.000469	2.05%
Ca 317.933†	413333.6	29.10	mg/L	0.312	145.5	mg/L	1.56	1.07%
Cd 228.802†	319.3	0.00847	mg/L	0.000204	0.04236	mg/L	0.001020	2.41%
Co 228.616†	2197.9	0.05672	mg/L	0.000438	0.2836	mg/L	0.00219	0.77%
Cr 267.716†	667.9	0.1104	mg/L	0.00120	0.5520	mg/L	0.00598	1.08%
Cu 324.752†	17950.1	0.07548	mg/L	0.000282	0.3774	mg/L	0.00141	0.37%
Fe 273.955†	207489.5	158.3	mg/L	1.90	791.3	mg/L	9.48	1.20%
K 766.490†	14039.4	7.044	mg/L	0.0813	35.22	mg/L	0.406	1.15%
Mg 279.077†	37594.5	25.41	mg/L	0.284	127.0	mg/L	1.42	1.12%
Mn 257.610†	328609.6	9.083	mg/L	0.1096	45.42	mg/L	0.548	1.21%
Mo 202.031†	90.3	0.00418	mg/L	0.000481	0.02090	mg/L	0.002403	11.49%
Na 589.592†	5621.5	0.4412	mg/L	0.00457	2.206	mg/L	0.0228	1.03%
Na 330.237†	-5.5	-0.07749	mg/L	0.151056	-0.3875	mg/L	0.75528	194.93%
Ni 231.604†	297.6	0.07221	mg/L	0.001673	0.3611	mg/L	0.00836	2.32%
Pb 220.353†	2347.5	0.3088	mg/L	0.00255	1.544	mg/L	0.0127	0.82%
Sb 206.836†	26.8	0.00801	mg/L	0.000467	0.04004	mg/L	0.002333	5.83%
Se 196.026†	16.3	0.01078	mg/L	0.004755	0.05392	mg/L	0.023776	44.10%
Si 288.158†	3340.8	1.555	mg/L	0.0200	7.777	mg/L	0.1001	1.29%
Sn 189.927†	-44.4	-0.00755	mg/L	0.000500	-0.03774	mg/L	0.002499	6.62%
Sr 421.552†	213985.5	0.2284	mg/L	0.00232	1.142	mg/L	0.0116	1.01%
Ti 334.903†	34546.6	1.656	mg/L	0.0190	8.281	mg/L	0.0949	1.15%
Tl 190.801†	-37.1	0.00141	mg/L	0.002325	0.00703	mg/L	0.011623	165.25%
V 292.402†	23994.9	0.1786	mg/L	0.00178	0.8930	mg/L	0.00888	0.99%
Zn 206.200†	3237.8	0.7987	mg/L	0.01198	3.993	mg/L	0.0599	1.50%

Sequence No.: 9
Sample ID: VR30 D SWC
Autosampler Location: 305
Date Collected: 11/16/2012 9:40:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2278324.3	100.9	%	0.13				0.13%
ScR 361.383	289032.3	101.1	%	0.60				0.59%
Ag 328.068†	-143.4	-0.00077	mg/L	0.000275	-0.00383	mg/L	0.001374	35.87%
Al 308.215†	202390.7	113.6	mg/L	1.13	568.2	mg/L	5.65	1.00%
As 188.979†	-78.3	0.04162	mg/L	0.003479	0.2081	mg/L	0.01740	8.36%
B 249.677†	75.1	0.00950	mg/L	0.000729	0.04749	mg/L	0.003647	7.68%
Ba 233.527†	7044.7	1.538	mg/L	0.0050	7.688	mg/L	0.0248	0.32%
Be 313.042†	2287.1	0.00337	mg/L	0.000038	0.01686	mg/L	0.000188	1.11%
Ca 317.933†	316955.2	22.31	mg/L	0.261	111.6	mg/L	1.31	1.17%
Cd 228.802†	170.4	0.00484	mg/L	0.000162	0.02418	mg/L	0.000811	3.35%
Co 228.616†	1530.3	0.03634	mg/L	0.000259	0.1817	mg/L	0.00130	0.71%
Cr 267.716†	677.4	0.1101	mg/L	0.00083	0.5504	mg/L	0.00414	0.75%
Cu 324.752†	22713.0	0.09068	mg/L	0.000915	0.4534	mg/L	0.00458	1.01%
Fe 273.955†	122919.1	93.75	mg/L	0.757	468.7	mg/L	3.78	0.81%
K 766.490†	10663.0	5.350	mg/L	0.0506	26.75	mg/L	0.253	0.95%
Mg 279.077†	36162.3	24.47	mg/L	0.235	122.4	mg/L	1.17	0.96%
Mn 257.610†	117928.4	3.260	mg/L	0.0282	16.30	mg/L	0.141	0.87%
Mo 202.031†	50.0	0.00224	mg/L	0.000279	0.01122	mg/L	0.001396	12.44%
Na 589.592†	10175.1	0.7986	mg/L	0.00830	3.993	mg/L	0.0415	1.04%
Na 330.237†	-3.2	0.3999	mg/L	0.12593	1.999	mg/L	0.6297	31.49%
Ni 231.604†	374.6	0.09089	mg/L	0.001860	0.4545	mg/L	0.00930	2.05%
Pb 220.353†	2020.7	0.2760	mg/L	0.00190	1.380	mg/L	0.0095	0.69%
Sb 206.836†	4.1	0.00152	mg/L	0.002680	0.00758	mg/L	0.013399	176.83%
Se 196.026†	19.3	0.01286	mg/L	0.003491	0.06428	mg/L	0.017453	27.15%
Si 288.158†	2012.7	0.9381	mg/L	0.00831	4.691	mg/L	0.0416	0.89%
Sn 189.927†	-35.4	-0.00589	mg/L	0.000936	-0.02943	mg/L	0.004678	15.90%
Sr 421.552†	256275.4	0.2736	mg/L	0.00281	1.368	mg/L	0.0140	1.03%
Ti 334.903†	61510.5	2.950	mg/L	0.0262	14.75	mg/L	0.131	0.89%
Tl 190.801†	-15.9	0.00298	mg/L	0.001542	0.01491	mg/L	0.007708	51.69%
V 292.402†	20627.2	0.1535	mg/L	0.00173	0.7677	mg/L	0.00863	1.12%
Zn 206.200†	1977.1	0.4877	mg/L	0.00234	2.439	mg/L	0.0117	0.48%

Sequence No.: 10
Sample ID: VR30 E SWC

Autosampler Location: 306
Date Collected: 11/16/2012 9:44:05 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311384.2	102.4	%	0.49				0.48%
ScR 361.383	292296.6	102.2	%	0.90				0.88%
Ag 328.068†	-158.6	-0.00084	mg/L	0.000344	-0.00421	mg/L	0.001718	40.78%
Al 308.215†	240475.3	135.0	mg/L	1.32	675.1	mg/L	6.59	0.98%
As 188.979†	-127.2	0.03169	mg/L	0.002950	0.1585	mg/L	0.01475	9.31%
B 249.677†	62.6	0.00788	mg/L	0.000863	0.03942	mg/L	0.004317	10.95%
Ba 233.527†	6971.3	1.519	mg/L	0.0137	7.594	mg/L	0.0685	0.90%
Be 313.042†	2594.1	0.00382	mg/L	0.000047	0.01910	mg/L	0.000233	1.22%
Ca 317.933†	218878.8	15.41	mg/L	0.157	77.05	mg/L	0.783	1.02%
Cd 228.802†	63.8	0.00150	mg/L	0.000182	0.00749	mg/L	0.000908	12.12%
Co 228.616†	1830.0	0.04358	mg/L	0.000563	0.2179	mg/L	0.00281	1.29%
Cr 267.716†	708.5	0.1157	mg/L	0.00192	0.5784	mg/L	0.00958	1.66%
Cu 324.752†	26515.0	0.1059	mg/L	0.00110	0.5294	mg/L	0.00550	1.04%
Fe 273.955†	143936.1	109.8	mg/L	1.24	548.9	mg/L	6.21	1.13%
K 766.490†	11246.5	5.643	mg/L	0.0386	28.21	mg/L	0.193	0.68%
Mg 279.077†	39859.6	26.97	mg/L	0.262	134.9	mg/L	1.31	0.97%
Mn 257.610†	62486.0	1.727	mg/L	0.0192	8.635	mg/L	0.0959	1.11%
Mo 202.031†	31.2	0.00138	mg/L	0.000182	0.00692	mg/L	0.000908	13.12%
Na 589.592†	12027.3	0.9440	mg/L	0.01222	4.720	mg/L	0.0611	1.29%
Na 330.237†	-8.2	0.3827	mg/L	0.17400	1.913	mg/L	0.8700	45.47%
Ni 231.604†	417.3	0.1013	mg/L	0.00226	0.5063	mg/L	0.01128	2.23%
Pb 220.353†	422.7	0.08070	mg/L	0.000817	0.4035	mg/L	0.00408	1.01%
Sb 206.836†	4.8	0.00203	mg/L	0.002279	0.01013	mg/L	0.011394	112.52%
Se 196.026†	22.1	0.01469	mg/L	0.002003	0.07343	mg/L	0.010016	13.64%
Si 288.158†	1514.3	0.7069	mg/L	0.00805	3.534	mg/L	0.0403	1.14%
Sn 189.927†	-30.3	-0.00535	mg/L	0.000385	-0.02676	mg/L	0.001923	7.19%
Sr 421.552†	164339.3	0.1754	mg/L	0.00187	0.8772	mg/L	0.00933	1.06%
Ti 334.903†	72845.9	3.495	mg/L	0.0345	17.47	mg/L	0.172	0.99%
Tl 190.801†	-27.4	0.00002	mg/L	0.002025	0.00012	mg/L	0.010127	>999.9%
V 292.402†	24789.3	0.1842	mg/L	0.00209	0.9212	mg/L	0.01046	1.14%
Zn 206.200†	1558.1	0.3843	mg/L	0.00293	1.922	mg/L	0.0147	0.76%

Sequence No.: 11
Sample ID: VR30 F SWC

Autosampler Location: 307
Date Collected: 11/16/2012 9:48:06 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2335671.1	103.5	%	0.57				0.56%
ScR 361.383	295425.7	103.3	%	0.36				0.35%
Ag 328.068†	-123.7	-0.00065	mg/L	0.000122	-0.00325	mg/L	0.000608	18.72%
Al 308.215†	243146.9	136.5	mg/L	1.55	682.6	mg/L	7.75	1.14%
As 188.979†	-124.0	0.03516	mg/L	0.003806	0.1758	mg/L	0.01903	10.83%
B 249.677†	52.3	0.00658	mg/L	0.000314	0.03288	mg/L	0.001572	4.78%
Ba 233.527†	5947.7	1.294	mg/L	0.0080	6.468	mg/L	0.0399	0.62%
Be 313.042†	2624.1	0.00387	mg/L	0.000009	0.01934	mg/L	0.000043	0.22%
Ca 317.933†	198838.3	14.00	mg/L	0.147	69.99	mg/L	0.734	1.05%
Cd 228.802†	65.4	0.00157	mg/L	0.000171	0.00786	mg/L	0.000854	10.85%
Co 228.616†	1760.4	0.04156	mg/L	0.000875	0.2078	mg/L	0.00438	2.11%
Cr 267.716†	714.1	0.1165	mg/L	0.00089	0.5825	mg/L	0.00445	0.76%
Cu 324.752†	28865.0	0.1147	mg/L	0.00267	0.5737	mg/L	0.01336	2.33%
Fe 273.955†	139042.8	106.0	mg/L	0.68	530.2	mg/L	3.39	0.64%
K 766.490†	11233.6	5.636	mg/L	0.0632	28.18	mg/L	0.316	1.12%
Mg 279.077†	38352.7	25.95	mg/L	0.216	129.8	mg/L	1.08	0.83%
Mn 257.610†	73481.2	2.031	mg/L	0.0163	10.15	mg/L	0.081	0.80%
Mo 202.031†	25.7	0.00113	mg/L	0.000660	0.00563	mg/L	0.003301	58.66%
Na 589.592†	12361.3	0.9702	mg/L	0.01292	4.851	mg/L	0.0646	1.33%
Na 330.237†	-3.6	0.5544	mg/L	0.07014	2.772	mg/L	0.3507	12.65%
Ni 231.604†	416.3	0.1010	mg/L	0.00188	0.5051	mg/L	0.00939	1.86%
Pb 220.353†	313.0	0.06748	mg/L	0.001074	0.3374	mg/L	0.00537	1.59%
Sb 206.836†	5.3	0.00213	mg/L	0.001072	0.01064	mg/L	0.005358	50.35%
Se 196.026†	22.5	0.01499	mg/L	0.004442	0.07497	mg/L	0.022212	29.63%
Si 288.158†	1302.0	0.6081	mg/L	0.00665	3.041	mg/L	0.0333	1.09%
Sn 189.927†	-26.8	-0.00464	mg/L	0.001177	-0.02322	mg/L	0.005884	25.34%
Sr 421.552†	170535.5	0.1821	mg/L	0.00217	0.9103	mg/L	0.01084	1.19%
Ti 334.903†	74072.0	3.553	mg/L	0.0371	17.77	mg/L	0.186	1.04%
Tl 190.801†	-24.7	0.00076	mg/L	0.002734	0.00382	mg/L	0.013671	358.34%
V 292.402†	22669.5	0.1682	mg/L	0.00328	0.8410	mg/L	0.01640	1.95%
Zn 206.200†	1583.3	0.3905	mg/L	0.00192	1.953	mg/L	0.0096	0.49%

Sequence No.: 12
Sample ID: VR30 G SWC

Autosampler Location: 308
Date Collected: 11/16/2012 9:52:07 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2282264.3	101.1	%	0.28				0.28%
ScR 361.383	294092.7	102.9	%	1.17				1.14%
Ag 328.068†	154.9	0.00093	mg/L	0.000133	0.00466	mg/L	0.000666	14.28%
Al 308.215†	259195.3	145.5	mg/L	1.35	727.7	mg/L	6.77	0.93%
As 188.979†	-133.3	0.03835	mg/L	0.001463	0.1917	mg/L	0.00732	3.82%
B 249.677†	54.6	0.00686	mg/L	0.000813	0.03428	mg/L	0.004063	11.85%
Ba 233.527†	5452.1	1.183	mg/L	0.0098	5.917	mg/L	0.0489	0.83%
Be 313.042†	2750.3	0.00405	mg/L	0.000054	0.02025	mg/L	0.000272	1.35%
Ca 317.933†	226126.0	15.92	mg/L	0.151	79.60	mg/L	0.757	0.95%
Cd 228.802†	57.1	0.00130	mg/L	0.000018	0.00649	mg/L	0.000091	1.40%
Co 228.616†	1882.9	0.04439	mg/L	0.000381	0.2220	mg/L	0.00191	0.86%
Cr 267.716†	1027.6	0.1670	mg/L	0.00182	0.8349	mg/L	0.00912	1.09%
Cu 324.752†	39506.5	0.1559	mg/L	0.00068	0.7794	mg/L	0.00342	0.44%
Fe 273.955†	147721.2	112.7	mg/L	0.84	563.3	mg/L	4.18	0.74%
K 766.490†	11750.0	5.895	mg/L	0.0618	29.48	mg/L	0.309	1.05%
Mg 279.077†	42799.3	28.96	mg/L	0.258	144.8	mg/L	1.29	0.89%
Mn 257.610†	66779.2	1.846	mg/L	0.0135	9.229	mg/L	0.0674	0.73%
Mo 202.031†	34.3	0.00153	mg/L	0.000201	0.00764	mg/L	0.001004	13.14%
Na 589.592†	14629.0	1.148	mg/L	0.0103	5.741	mg/L	0.0517	0.90%
Na 330.237†	-4.2	0.6052	mg/L	0.01543	3.026	mg/L	0.0771	2.55%
Ni 231.604†	502.6	0.1220	mg/L	0.00241	0.6098	mg/L	0.01207	1.98%
Pb 220.353†	408.1	0.08130	mg/L	0.001102	0.4065	mg/L	0.00551	1.36%
Sb 206.836†	5.5	0.00165	mg/L	0.002497	0.00823	mg/L	0.012483	151.72%
Se 196.026†	33.0	0.02201	mg/L	0.004233	0.1100	mg/L	0.02116	19.23%
Si 288.158†	1008.6	0.4721	mg/L	0.00726	2.361	mg/L	0.0363	1.54%
Sn 189.927†	-35.7	-0.00664	mg/L	0.000881	-0.03319	mg/L	0.004404	13.27%
Sr 421.552†	198112.6	0.2115	mg/L	0.00183	1.057	mg/L	0.0092	0.87%
Ti 334.903†	80106.7	3.843	mg/L	0.0309	19.21	mg/L	0.154	0.80%
Tl 190.801†	-34.4	-0.00245	mg/L	0.003700	-0.01226	mg/L	0.018500	150.95%
V 292.402†	25520.1	0.1898	mg/L	0.00102	0.9488	mg/L	0.00509	0.54%
Zn 206.200†	1509.9	0.3724	mg/L	0.00300	1.862	mg/L	0.0150	0.81%

Sequence No.: 13
Sample ID: VR30 H SWC

Autosampler Location: 309
Date Collected: 11/16/2012 9:56:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2304118.0	102.1	%	0.36				0.35%
ScR 361.383	292173.5	102.2	%	0.43				0.42%
Ag 328.068†	-26.8	-0.00011	mg/L	0.000153	-0.00056	mg/L	0.000767	137.32%
Al 308.215†	182483.0	102.5	mg/L	0.90	512.3	mg/L	4.51	0.88%
As 188.979†	-86.8	0.03301	mg/L	0.003044	0.1651	mg/L	0.01522	9.22%
B 249.677†	56.6	0.00714	mg/L	0.000636	0.03572	mg/L	0.003182	8.91%
Ba 233.527†	8522.4	1.865	mg/L	0.0101	9.324	mg/L	0.0507	0.54%
Be 313.042†	1982.1	0.00292	mg/L	0.000037	0.01460	mg/L	0.000184	1.26%
Ca 317.933†	200605.4	14.12	mg/L	0.067	70.62	mg/L	0.337	0.48%
Cd 228.802†	142.9	0.00408	mg/L	0.000100	0.02041	mg/L	0.000498	2.44%
Co 228.616†	1380.0	0.03248	mg/L	0.000055	0.1624	mg/L	0.00027	0.17%
Cr 267.716†	619.7	0.1012	mg/L	0.00056	0.5058	mg/L	0.00278	0.55%
Cu 324.752†	14634.6	0.05931	mg/L	0.000195	0.2966	mg/L	0.00098	0.33%
Fe 273.955†	111084.1	84.72	mg/L	0.895	423.6	mg/L	4.47	1.06%
K 766.490†	11432.8	5.736	mg/L	0.0169	28.68	mg/L	0.085	0.30%
Mg 279.077†	24568.5	16.62	mg/L	0.121	83.08	mg/L	0.606	0.73%
Mn 257.610†	126564.1	3.498	mg/L	0.0331	17.49	mg/L	0.166	0.95%
Mo 202.031†	36.8	0.00168	mg/L	0.000151	0.00839	mg/L	0.000757	9.02%
Na 589.592†	9746.1	0.7649	mg/L	0.00707	3.825	mg/L	0.0354	0.92%
Na 330.237†	-3.3	0.3435	mg/L	0.17601	1.717	mg/L	0.8801	51.25%
Ni 231.604†	365.8	0.08876	mg/L	0.001396	0.4438	mg/L	0.00698	1.57%
Pb 220.353†	1019.0	0.1485	mg/L	0.00129	0.7425	mg/L	0.00646	0.87%
Sb 206.836†	7.4	0.00251	mg/L	0.001512	0.01254	mg/L	0.007558	60.27%
Se 196.026†	17.1	0.01136	mg/L	0.000712	0.05681	mg/L	0.003560	6.27%
Si 288.158†	3243.5	1.509	mg/L	0.0108	7.545	mg/L	0.0539	0.71%
Sn 189.927†	-29.3	-0.00536	mg/L	0.000912	-0.02682	mg/L	0.004560	17.01%
Sr 421.552†	164364.3	0.1755	mg/L	0.00133	0.8773	mg/L	0.00665	0.76%
Ti 334.903†	58175.4	2.791	mg/L	0.0237	13.95	mg/L	0.119	0.85%
Tl 190.801†	-17.9	0.00134	mg/L	0.000928	0.00671	mg/L	0.004642	69.21%
V 292.402†	18134.9	0.1349	mg/L	0.00040	0.6745	mg/L	0.00200	0.30%
Zn 206.200†	2160.2	0.5329	mg/L	0.00349	2.664	mg/L	0.0174	0.65%

Sequence No.: 14
Sample ID: CV 2
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 10:00:09 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2211042.3	97.96	%	0.069				0.07%
ScR 361.383	281425.6	98.42	%	1.154				1.17%
Ag 328.068†	174051.3	0.9852	mg/L	0.00100	0.9852	mg/L	0.00100	0.10%
Al 308.215†	3696.9	2.041	mg/L	0.0284	2.041	mg/L	0.0284	1.39%
As 188.979†	3657.6	1.961	mg/L	0.0138	1.961	mg/L	0.0138	0.70%
B 249.677†	7567.5	0.9649	mg/L	0.01213	0.9649	mg/L	0.01213	1.26%
Ba 233.527†	4721.2	1.040	mg/L	0.0139	1.040	mg/L	0.0139	1.34%
Be 313.042†	626887.5	0.9424	mg/L	0.00875	0.9424	mg/L	0.00875	0.93%
Ca 317.933†	27675.8	1.948	mg/L	0.0181	1.948	mg/L	0.0181	0.93%
Cd 228.802†	33109.2	1.033	mg/L	0.0016	1.033	mg/L	0.0016	0.15%
Co 228.616†	35891.2	1.016	mg/L	0.0028	1.016	mg/L	0.0028	0.27%
Cr 267.716†	6399.9	1.030	mg/L	0.0131	1.030	mg/L	0.0131	1.27%
Cu 324.752†	262871.7	1.010	mg/L	0.0029	1.010	mg/L	0.0029	0.29%
Fe 273.955†	2689.1	2.044	mg/L	0.0153	2.044	mg/L	0.0153	0.75%
K 766.490†	39762.4	19.95	mg/L	0.215	19.95	mg/L	0.215	1.08%
Mg 279.077†	3000.3	2.042	mg/L	0.0213	2.042	mg/L	0.0213	1.04%
Mn 257.610†	35687.8	0.9868	mg/L	0.00584	0.9868	mg/L	0.00584	0.59%
Mo 202.031†	20686.3	1.031	mg/L	0.0051	1.031	mg/L	0.0051	0.50%
Na 589.592†	624588.1	49.02	mg/L	0.566	49.02	mg/L	0.566	1.16%
Na 330.237†	1491.7	51.81	mg/L	0.515	51.81	mg/L	0.515	0.99%
Ni 231.604†	4026.4	0.9773	mg/L	0.01189	0.9773	mg/L	0.01189	1.22%
Pb 220.353†	16046.0	2.006	mg/L	0.0116	2.006	mg/L	0.0116	0.58%
Sb 206.836†	6936.1	2.120	mg/L	0.0113	2.120	mg/L	0.0113	0.53%
Se 196.026†	2873.6	1.929	mg/L	0.0077	1.929	mg/L	0.0077	0.40%
Si 288.158†	4492.6	2.087	mg/L	0.0245	2.087	mg/L	0.0245	1.17%
Sn 189.927†	3917.5	1.006	mg/L	0.0067	1.006	mg/L	0.0067	0.67%
Sr 421.552†	893900.0	0.9543	mg/L	0.00885	0.9543	mg/L	0.00885	0.93%
Ti 334.903†	21172.9	1.015	mg/L	0.0086	1.015	mg/L	0.0086	0.85%
Tl 190.801†	5037.5	1.962	mg/L	0.0100	1.962	mg/L	0.0100	0.51%
V 292.402†	132402.6	1.016	mg/L	0.0017	1.016	mg/L	0.0017	0.16%
Zn 206.200†	4049.1	0.9986	mg/L	0.00989	0.9986	mg/L	0.00989	0.99%

Sequence No.: 15
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/16/2012 10:05:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2265302.0	100.4	%	0.82				0.82%
ScR 361.383	286386.1	100.2	%	1.19				1.19%
Ag 328.068†	43.5	0.00025	mg/L	0.000120	0.00025	mg/L	0.000120	48.67%
Al 308.215†	21.7	0.01219	mg/L	0.007834	0.01219	mg/L	0.007834	64.25%
As 188.979†	0.3	0.00019	mg/L	0.000600	0.00019	mg/L	0.000600	312.17%
B 249.677†	12.0	0.00153	mg/L	0.000504	0.00153	mg/L	0.000504	32.86%
Ba 233.527†	-1.7	-0.00038	mg/L	0.000659	-0.00038	mg/L	0.000659	173.90%
Be 313.042†	64.0	0.00010	mg/L	0.000019	0.00010	mg/L	0.000019	19.48%
Ca 317.933†	16.5	0.00116	mg/L	0.000843	0.00116	mg/L	0.000843	72.42%
Cd 228.802†	-8.9	-0.00028	mg/L	0.000164	-0.00028	mg/L	0.000164	58.05%
Co 228.616†	-15.4	-0.00044	mg/L	0.000071	-0.00044	mg/L	0.000071	16.37%
Cr 267.716†	-8.6	-0.00139	mg/L	0.000844	-0.00139	mg/L	0.000844	60.74%
Cu 324.752†	68.6	0.00026	mg/L	0.000163	0.00026	mg/L	0.000163	61.90%
Fe 273.955†	5.6	0.00430	mg/L	0.000901	0.00430	mg/L	0.000901	20.97%
K 766.490†	18.2	0.00913	mg/L	0.009749	0.00913	mg/L	0.009749	106.78%
Mg 279.077†	0.3	0.00020	mg/L	0.005138	0.00020	mg/L	0.005138	>999.9%
Mn 257.610†	-7.6	-0.00021	mg/L	0.000032	-0.00021	mg/L	0.000032	15.24%
Mo 202.031†	19.2	0.00096	mg/L	0.000202	0.00096	mg/L	0.000202	21.17%
Na 589.592†	39.1	0.00307	mg/L	0.003488	0.00307	mg/L	0.003488	113.79%
Na 330.237†	-5.3	-0.1843	mg/L	0.30022	-0.1843	mg/L	0.30022	162.93%
Ni 231.604†	-1.2	-0.00029	mg/L	0.000758	-0.00029	mg/L	0.000758	263.29%
Pb 220.353†	-0.0	-0.00000	mg/L	0.000645	-0.00000	mg/L	0.000645	>999.9%
Sb 206.836†	5.6	0.00173	mg/L	0.000288	0.00173	mg/L	0.000288	16.60%
Se 196.026†	5.5	0.00369	mg/L	0.002885	0.00369	mg/L	0.002885	78.20%
Si 288.158†	-4.6	-0.00215	mg/L	0.000930	-0.00215	mg/L	0.000930	43.21%
Sn 189.927†	-0.1	-0.00004	mg/L	0.000153	-0.00004	mg/L	0.000153	422.92%
Sr 421.552†	74.2	0.00008	mg/L	0.000064	0.00008	mg/L	0.000064	81.28%
Ti 334.903†	13.8	0.00066	mg/L	0.000293	0.00066	mg/L	0.000293	44.17%
Tl 190.801†	3.8	0.00148	mg/L	0.002469	0.00148	mg/L	0.002469	166.41%
V 292.402†	-13.7	-0.00011	mg/L	0.000165	-0.00011	mg/L	0.000165	148.94%
Zn 206.200†	0.1	0.00001	mg/L	0.000819	0.00001	mg/L	0.000819	>999.9%

Sequence No.: 16
Sample ID: VR32 A-L SWC

Autosampler Location: 310
Date Collected: 11/16/2012 10:09:17 AM
Data Type: Original

Dilution: ~~5.000000X~~
25 BA 11/16/12

Nebulizer Parameters: VR32 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263964.5	100.3	%	1.16				1.16%
ScR 361.383	289102.2	101.1	%	1.21				1.20%
Ag 328.068†	1.8	0.00002	mg/L	0.000139	0.00009	mg/L	0.000697	766.84%
Al 308.215†	35071.1	19.69	mg/L	0.251	98.46	mg/L	1.256	1.28%
As 188.979†	-6.8	0.01278	mg/L	0.001588	0.06388	mg/L	0.007941	12.43%
B 249.677†	16.0	0.00202	mg/L	0.000804	0.01011	mg/L	0.004018	39.73%
Ba 233.527†	1517.2	0.3312	mg/L	0.00507	1.656	mg/L	0.0253	1.53%
Be 313.042†	477.1	0.00070	mg/L	0.000016	0.00352	mg/L	0.000078	2.20%
Ca 317.933†	53929.3	3.797	mg/L	0.0476	18.98	mg/L	0.238	1.25%
Cd 228.802†	51.9	0.00150	mg/L	0.000067	0.00748	mg/L	0.000336	4.49%
Co 228.616†	318.2	0.00762	mg/L	0.000172	0.03808	mg/L	0.000858	2.25%
Cr 267.716†	172.9	0.02808	mg/L	0.000513	0.1404	mg/L	0.00257	1.83%
Cu 324.752†	3757.1	0.01517	mg/L	0.000277	0.07583	mg/L	0.001386	1.83%
Fe 273.955†	25985.8	19.82	mg/L	0.298	99.10	mg/L	1.488	1.50%
K 766.490†	3537.6	1.775	mg/L	0.0078	8.874	mg/L	0.0392	0.44%
Mg 279.077†	6835.6	4.625	mg/L	0.0727	23.12	mg/L	0.364	1.57%
Mn 257.610†	34973.5	0.9667	mg/L	0.01391	4.833	mg/L	0.0696	1.44%
Mo 202.031†	14.8	0.00069	mg/L	0.000185	0.00347	mg/L	0.000926	26.67%
Na 589.592†	2333.0	0.1831	mg/L	0.00242	0.9156	mg/L	0.01208	1.32%
Na 330.237†	-7.3	-0.1758	mg/L	0.12318	-0.8792	mg/L	0.61592	70.05%
Ni 231.604†	106.2	0.02576	mg/L	0.001486	0.1288	mg/L	0.00743	5.77%
Pb 220.353†	344.1	0.04693	mg/L	0.000479	0.2346	mg/L	0.00240	1.02%
Sb 206.836†	2.8	0.00079	mg/L	0.002290	0.00394	mg/L	0.011451	290.68%
Se 196.026†	7.5	0.00503	mg/L	0.000195	0.02515	mg/L	0.000974	3.87%
Si 288.158†	610.3	0.2842	mg/L	0.00735	1.421	mg/L	0.0367	2.59%
Sn 189.927†	-15.2	-0.00333	mg/L	0.000876	-0.01667	mg/L	0.004380	26.27%
Sr 421.552†	49479.6	0.05282	mg/L	0.000685	0.2641	mg/L	0.00343	1.30%
Ti 334.903†	12091.4	0.5800	mg/L	0.00664	2.900	mg/L	0.0332	1.14%
Tl 190.801†	-4.1	0.00038	mg/L	0.001668	0.00189	mg/L	0.008338	442.25%
V 292.402†	3634.0	0.02700	mg/L	0.000188	0.1350	mg/L	0.00094	0.70%
Zn 206.200†	643.0	0.1586	mg/L	0.00272	0.7930	mg/L	0.01358	1.71%

Sequence No.: 17
Sample ID: VR32 A SWC

Autosampler Location: 311
Date Collected: 11/16/2012 10:13:18 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2294229.4	101.6	%	0.46				0.45%
ScR 361.383	295890.1	103.5	%	0.43				0.41%
Ag 328.068†	-156.2	-0.00084	mg/L	0.000165	-0.00422	mg/L	0.000823	19.50%
Al 308.215†	177445.1	99.63	mg/L	0.360	498.2	mg/L	1.80	0.36%
As 188.979†	-27.6	0.06704	mg/L	0.003549	0.3352	mg/L	0.01774	5.29%
B 249.677†	73.7	0.00931	mg/L	0.000509	0.04654	mg/L	0.002545	5.47%
Ba 233.527†	7580.0	1.654	mg/L	0.0060	8.272	mg/L	0.0300	0.36%
Be 313.042†	2081.1	0.00307	mg/L	0.000006	0.01533	mg/L	0.000032	0.21%
Ca 317.933†	274913.4	19.35	mg/L	0.161	96.77	mg/L	0.804	0.83%
Cd 228.802†	304.1	0.00885	mg/L	0.000145	0.04426	mg/L	0.000726	1.64%
Co 228.616†	1656.8	0.03993	mg/L	0.000312	0.1997	mg/L	0.00156	0.78%
Cr 267.716†	870.7	0.1414	mg/L	0.00064	0.7071	mg/L	0.00321	0.45%
Cu 324.752†	18754.4	0.07576	mg/L	0.000979	0.3788	mg/L	0.00489	1.29%
Fe 273.955†	131271.6	100.1	mg/L	0.52	500.6	mg/L	2.62	0.52%
K 766.490†	17547.5	8.804	mg/L	0.0319	44.02	mg/L	0.159	0.36%
Mg 279.077†	34216.1	23.15	mg/L	0.098	115.7	mg/L	0.49	0.42%
Mn 257.610†	176776.0	4.886	mg/L	0.0265	24.43	mg/L	0.133	0.54%
Mo 202.031†	68.0	0.00317	mg/L	0.000211	0.01585	mg/L	0.001055	6.65%
Na 589.592†	11555.3	0.9069	mg/L	0.00610	4.535	mg/L	0.0305	0.67%
Na 330.237†	4.8	0.5629	mg/L	0.15697	2.815	mg/L	0.7848	27.88%
Ni 231.604†	518.2	0.1257	mg/L	0.00069	0.6287	mg/L	0.00343	0.55%
Pb 220.353†	1721.2	0.2350	mg/L	0.00049	1.175	mg/L	0.0024	0.21%
Sb 206.836†	16.5	0.00474	mg/L	0.001568	0.02368	mg/L	0.007839	33.10%
Se 196.026†	20.0	0.01335	mg/L	0.003491	0.06677	mg/L	0.017455	26.14%
Si 288.158†	2923.8	1.361	mg/L	0.0023	6.807	mg/L	0.0114	0.17%
Sn 189.927†	-36.0	-0.00641	mg/L	0.000870	-0.03203	mg/L	0.004351	13.58%
Sr 421.552†	246355.3	0.2630	mg/L	0.00116	1.315	mg/L	0.0058	0.44%
Ti 334.903†	60402.7	2.897	mg/L	0.0140	14.49	mg/L	0.070	0.48%
Tl 190.801†	-24.7	0.00025	mg/L	0.001048	0.00123	mg/L	0.005241	425.28%
V 292.402†	18226.2	0.1354	mg/L	0.00162	0.6769	mg/L	0.00811	1.20%
Zn 206.200†	3230.5	0.7969	mg/L	0.00316	3.984	mg/L	0.0158	0.40%

Sequence No.: 18
Sample ID: VR32 ADUP SWC

Autosampler Location: 312
Date Collected: 11/16/2012 10:17:19 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ADUP SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2258859.7	100.1	%	0.74				0.74%
ScR 361.383	291427.6	101.9	%	0.98				0.96%
Ag 328.068†	-180.6	-0.00098	mg/L	0.000168	-0.00490	mg/L	0.000841	17.17%
Al 308.215†	185344.6	104.1	mg/L	2.26	520.3	mg/L	11.32	2.18%
As 188.979†	-35.8	0.06971	mg/L	0.002642	0.3486	mg/L	0.01321	3.79%
B 249.677†	84.4	0.01068	mg/L	0.000531	0.05338	mg/L	0.002653	4.97%
Ba 233.527†	7849.4	1.713	mg/L	0.0148	8.565	mg/L	0.0740	0.86%
Be 313.042†	2146.5	0.00316	mg/L	0.000038	0.01580	mg/L	0.000190	1.21%
Ca 317.933†	297797.0	20.97	mg/L	0.486	104.8	mg/L	2.43	2.32%
Cd 228.802†	308.7	0.00898	mg/L	0.000333	0.04492	mg/L	0.001666	3.71%
Co 228.616†	1688.0	0.04027	mg/L	0.000520	0.2013	mg/L	0.00260	1.29%
Cr 267.716†	859.6	0.1398	mg/L	0.00211	0.6990	mg/L	0.01053	1.51%
Cu 324.752†	21237.5	0.08548	mg/L	0.000181	0.4274	mg/L	0.00090	0.21%
Fe 273.955†	138096.9	105.3	mg/L	2.40	526.6	mg/L	11.98	2.27%
K 766.490†	18920.4	9.493	mg/L	0.2101	47.46	mg/L	1.051	2.21%
Mg 279.077†	35088.2	23.74	mg/L	0.528	118.7	mg/L	2.64	2.22%
Mn 257.610†	173937.9	4.808	mg/L	0.1119	24.04	mg/L	0.560	2.33%
Mo 202.031†	73.3	0.00342	mg/L	0.000123	0.01708	mg/L	0.000616	3.61%
Na 589.592†	12184.0	0.9563	mg/L	0.01839	4.781	mg/L	0.0920	1.92%
Na 330.237†	5.5	0.6358	mg/L	0.14328	3.179	mg/L	0.7164	22.54%
Ni 231.604†	548.6	0.1331	mg/L	0.00071	0.6656	mg/L	0.00357	0.54%
Pb 220.353†	1770.7	0.2420	mg/L	0.00142	1.210	mg/L	0.0071	0.59%
Sb 206.836†	11.0	0.00323	mg/L	0.003166	0.01614	mg/L	0.015831	98.11%
Se 196.026†	18.3	0.01221	mg/L	0.003090	0.06103	mg/L	0.015451	25.32%
Si 288.158†	2258.9	1.052	mg/L	0.0106	5.262	mg/L	0.0528	1.00%
Sn 189.927†	-41.6	-0.00763	mg/L	0.000700	-0.03814	mg/L	0.003502	9.18%
Sr 421.552†	273751.5	0.2922	mg/L	0.00604	1.461	mg/L	0.0302	2.07%
Ti 334.903†	65590.3	3.146	mg/L	0.0704	15.73	mg/L	0.352	2.24%
Tl 190.801†	-25.2	0.00060	mg/L	0.001117	0.00300	mg/L	0.005586	186.48%
V 292.402†	19485.2	0.1447	mg/L	0.00087	0.7233	mg/L	0.00437	0.60%
Zn 206.200†	3337.0	0.8232	mg/L	0.00465	4.116	mg/L	0.0232	0.56%

Sequence No.: 19
Sample ID: VR32 ASPK SWC

Autosampler Location: 313
Date Collected: 11/16/2012 10:21:20 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2267775.0	100.5	%	0.74				0.74%
ScR 361.383	288152.1	100.8	%	0.99				0.99%
Ag 328.068†	35393.3	0.2004	mg/L	0.00195	1.002	mg/L	0.0098	0.97%
Al 308.215†	185558.0	104.2	mg/L	0.86	520.9	mg/L	4.28	0.82%
As 188.979†	1450.8	0.8573	mg/L	0.00259	4.286	mg/L	0.0129	0.30%
B 249.677†	95.2	0.01162	mg/L	0.001174	0.05810	mg/L	0.005871	10.10%
Ba 233.527†	11720.8	2.566	mg/L	0.0301	12.83	mg/L	0.150	1.17%
Be 313.042†	133048.2	0.2000	mg/L	0.00124	0.9998	mg/L	0.00622	0.62%
Ca 317.933†	407610.2	28.70	mg/L	0.227	143.5	mg/L	1.14	0.79%
Cd 228.802†	7462.7	0.2297	mg/L	0.00052	1.149	mg/L	0.0026	0.23%
Co 228.616†	9152.5	0.2518	mg/L	0.00082	1.259	mg/L	0.0041	0.33%
Cr 267.716†	2209.3	0.3566	mg/L	0.00450	1.783	mg/L	0.0225	1.26%
Cu 324.752†	77635.0	0.3023	mg/L	0.00256	1.512	mg/L	0.0128	0.85%
Fe 273.955†	137361.3	104.8	mg/L	1.04	523.8	mg/L	5.21	1.00%
K 766.490†	26725.3	13.41	mg/L	0.100	67.04	mg/L	0.502	0.75%
Mg 279.077†	40422.4	27.36	mg/L	0.279	136.8	mg/L	1.40	1.02%
Mn 257.610†	183860.9	5.082	mg/L	0.0486	25.41	mg/L	0.243	0.96%
Mo 202.031†	79.1	0.00361	mg/L	0.000193	0.01806	mg/L	0.000965	5.34%
Na 589.592†	63258.3	4.965	mg/L	0.0361	24.82	mg/L	0.181	0.73%
Na 330.237†	124.9	4.729	mg/L	0.1993	23.65	mg/L	0.997	4.21%
Ni 231.604†	1353.0	0.3280	mg/L	0.00417	1.640	mg/L	0.0209	1.27%
Pb 220.353†	8229.0	1.049	mg/L	0.0041	5.247	mg/L	0.0207	0.39%
Sb 206.836†	20.8	0.00391	mg/L	0.001979	0.01956	mg/L	0.009895	50.59%
Se 196.026†	1181.7	0.7933	mg/L	0.00294	3.967	mg/L	0.0147	0.37%
Si 288.158†	2476.2	1.155	mg/L	0.0142	5.773	mg/L	0.0708	1.23%
Sn 189.927†	-51.2	-0.00910	mg/L	0.000826	-0.04549	mg/L	0.004132	9.08%
Sr 421.552†	466875.1	0.4984	mg/L	0.00421	2.492	mg/L	0.0210	0.84%
Ti 334.903†	66391.7	3.184	mg/L	0.0267	15.92	mg/L	0.133	0.84%
Tl 190.801†	1963.5	0.7764	mg/L	0.00237	3.882	mg/L	0.0119	0.31%
V 292.402†	46657.3	0.3531	mg/L	0.00355	1.766	mg/L	0.0177	1.00%
Zn 206.200†	4206.7	1.038	mg/L	0.0139	5.189	mg/L	0.0693	1.34%

Sequence No.: 20
Sample ID: ~~VR32 APOST SWC~~ 222222
Dilution: 5.000000X

Autosampler Location: 314
Date Collected: 11/16/2012 10:25:07 AM
Data Type: Original

Nebulizer Parameters: VR32 APOST SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2240449.9	99.26	%	0.413				0.42%
ScR 361.383	285107.0	99.71	%	0.715				0.72%
Ag 328.068†	84603.8	0.4789	mg/L	0.00721	2.395	mg/L	0.0360	1.51%
Al 308.215†	193242.4	108.5	mg/L	1.06	542.5	mg/L	5.29	0.98%
As 188.979†	3536.3	1.959	mg/L	0.0221	9.793	mg/L	0.1105	1.13%
B 249.677†	95.0	0.01100	mg/L	0.001130	0.05500	mg/L	0.005651	10.27%
Ba 233.527†	17289.1	3.793	mg/L	0.0334	18.97	mg/L	0.167	0.88%
Be 313.042†	307237.9	0.4618	mg/L	0.00459	2.309	mg/L	0.0230	0.99%
Ca 317.933†	428479.5	30.17	mg/L	0.279	150.8	mg/L	1.39	0.92%
Cd 228.802†	17177.9	0.5293	mg/L	0.00645	2.646	mg/L	0.0323	1.22%
Co 228.616†	19382.6	0.5419	mg/L	0.00575	2.710	mg/L	0.0287	1.06%
Cr 267.716†	3973.4	0.6399	mg/L	0.00719	3.200	mg/L	0.0359	1.12%
Cu 324.752†	150970.1	0.5845	mg/L	0.00815	2.922	mg/L	0.0408	1.39%
Fe 273.955†	141965.9	108.3	mg/L	1.57	541.4	mg/L	7.86	1.45%
K 766.490†	37840.4	18.98	mg/L	0.128	94.92	mg/L	0.640	0.67%
Mg 279.077†	51548.6	34.90	mg/L	0.369	174.5	mg/L	1.84	1.06%
Mn 257.610†	205040.2	5.668	mg/L	0.0698	28.34	mg/L	0.349	1.23%
Mo 202.031†	77.4	0.00349	mg/L	0.000575	0.01747	mg/L	0.002874	16.45%
Na 589.592†	129420.7	10.16	mg/L	0.073	50.79	mg/L	0.367	0.72%
Na 330.237†	291.3	10.41	mg/L	0.360	52.05	mg/L	1.800	3.46%
Ni 231.604†	2466.2	0.5976	mg/L	0.00539	2.988	mg/L	0.0270	0.90%
Pb 220.353†	16945.3	2.140	mg/L	0.0217	10.70	mg/L	0.108	1.01%
Sb 206.836†	31.5	0.00415	mg/L	0.002091	0.02074	mg/L	0.010456	50.42%
Se 196.026†	2830.4	1.900	mg/L	0.0200	9.502	mg/L	0.0998	1.05%
Si 288.158†	3129.4	1.460	mg/L	0.0246	7.301	mg/L	0.1232	1.69%
Sn 189.927†	-47.2	-0.00785	mg/L	0.000324	-0.03925	mg/L	0.001621	4.13%
Sr 421.552†	692965.8	0.7398	mg/L	0.00683	3.699	mg/L	0.0341	0.92%
Ti 334.903†	64649.4	3.100	mg/L	0.0325	15.50	mg/L	0.162	1.05%
Tl 190.801†	4673.1	1.834	mg/L	0.0180	9.170	mg/L	0.0901	0.98%
V 292.402†	81840.2	0.6230	mg/L	0.00817	3.115	mg/L	0.0408	1.31%
Zn 206.200†	5332.7	1.316	mg/L	0.0176	6.578	mg/L	0.0879	1.34%

Sequence No.: 21
Sample ID: VR32 L SWC

Autosampler Location: 315
Date Collected: 11/16/2012 10:28:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2241870.5	99.32	%	0.252				0.25%
ScR 361.383	285688.7	99.92	%	1.744				1.75%
Ag 328.068†	-12.0	-0.00002	mg/L	0.000168	-0.00011	mg/L	0.000842	772.65%
Al 308.215†	139525.2	78.34	mg/L	0.590	391.7	mg/L	2.95	0.75%
As 188.979†	-75.9	0.07352	mg/L	0.000772	0.3676	mg/L	0.00386	1.05%
B 249.677†	128.5	0.01620	mg/L	0.000486	0.08100	mg/L	0.002431	3.00%
Ba 233.527†	16971.6	3.717	mg/L	0.0579	18.59	mg/L	0.290	1.56%
Be 313.042†	2116.0	0.00310	mg/L	0.000074	0.01550	mg/L	0.000368	2.38%
Ca 317.933†	844026.3	59.42	mg/L	0.395	297.1	mg/L	1.97	0.66%
Cd 228.802†	1625.6	0.05046	mg/L	0.000104	0.2523	mg/L	0.00052	0.21%
Co 228.616†	3466.7	0.08816	mg/L	0.000305	0.4408	mg/L	0.00152	0.35%
Cr 267.716†	2334.7	0.3760	mg/L	0.00494	1.880	mg/L	0.0247	1.31%
Cu 324.752†	53505.1	0.2109	mg/L	0.00025	1.055	mg/L	0.0012	0.12%
Fe 273.955†	189271.1	144.4	mg/L	1.06	721.8	mg/L	5.32	0.74%
K 766.490†	34203.1	17.16	mg/L	0.203	85.80	mg/L	1.015	1.18%
Mg 279.077†	69358.3	46.96	mg/L	0.334	234.8	mg/L	1.67	0.71%
Mn 257.610†	348969.7	9.646	mg/L	0.0702	48.23	mg/L	0.351	0.73%
Mo 202.031†	112.8	0.00496	mg/L	0.000375	0.02480	mg/L	0.001876	7.56%
Na 589.592†	4771.3	0.3745	mg/L	0.00153	1.872	mg/L	0.0077	0.41%
Na 330.237†	-12.2	-0.3171	mg/L	0.04777	-1.585	mg/L	0.2388	15.06%
Ni 231.604†	1172.3	0.2845	mg/L	0.00603	1.422	mg/L	0.0301	2.12%
Pb 220.353†	15280.2	1.923	mg/L	0.0086	9.615	mg/L	0.0428	0.45%
Sb 206.836†	44.7	0.01057	mg/L	0.001086	0.05284	mg/L	0.005430	10.28%
Se 196.026†	13.0	0.00859	mg/L	0.001729	0.04296	mg/L	0.008646	20.13%
Si 288.158†	2138.7	0.9996	mg/L	0.01572	4.998	mg/L	0.0786	1.57%
Sn 189.927†	-41.2	-0.00256	mg/L	0.001223	-0.01278	mg/L	0.006116	47.86%
Sr 421.552†	467519.9	0.4991	mg/L	0.00294	2.495	mg/L	0.0147	0.59%
Ti 334.903†	85682.3	4.108	mg/L	0.0274	20.54	mg/L	0.137	0.67%
Tl 190.801†	-21.3	0.00588	mg/L	0.001727	0.02939	mg/L	0.008636	29.39%
V 292.402†	21033.7	0.1563	mg/L	0.00043	0.7817	mg/L	0.00217	0.28%
Zn 206.200†	10204.8	2.517	mg/L	0.0419	12.59	mg/L	0.209	1.66%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/16/2012 10:32:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2199777.5	97.46	%	0.705				0.72%
ScR 361.383	274493.3	96.00	%	0.742				0.77%
Ag 328.068†	178100.1	1.008	mg/L	0.0097	1.008	mg/L	0.0097	0.96%
Al 308.215†	3790.5	2.093	mg/L	0.0278	2.093	mg/L	0.0278	1.33%
As 188.979†	3762.9	2.019	mg/L	0.0205	2.019	mg/L	0.0205	1.02%
B 249.677†	7776.1	0.9915	mg/L	0.01126	0.9915	mg/L	0.01126	1.14%
Ba 233.527†	4903.7	1.080	mg/L	0.0061	1.080	mg/L	0.0061	0.56%
Be 313.042†	645145.2	0.9699	mg/L	0.00944	0.9699	mg/L	0.00944	0.97%
Ca 317.933†	30184.6	2.125	mg/L	0.0195	2.125	mg/L	0.0195	0.92%
Cd 228.802†	33947.8	1.059	mg/L	0.0092	1.059	mg/L	0.0092	0.87%
Co 228.616†	37015.0	1.048	mg/L	0.0100	1.048	mg/L	0.0100	0.96%
Cr 267.716†	6578.2	1.059	mg/L	0.0094	1.059	mg/L	0.0094	0.89%
Cu 324.752†	268679.8	1.033	mg/L	0.0088	1.033	mg/L	0.0088	0.86%
Fe 273.955†	2814.0	2.139	mg/L	0.0124	2.139	mg/L	0.0124	0.58%
K 766.490†	40847.1	20.49	mg/L	0.188	20.49	mg/L	0.188	0.92%
Mg 279.077†	3093.4	2.105	mg/L	0.0124	2.105	mg/L	0.0124	0.59%
Mn 257.610†	38361.5	1.061	mg/L	0.0078	1.061	mg/L	0.0078	0.74%
Mo 202.031†	21127.2	1.053	mg/L	0.0082	1.053	mg/L	0.0082	0.78%
Na 589.592†	642349.7	50.42	mg/L	0.471	50.42	mg/L	0.471	0.93%
Na 330.237†	1524.0	52.94	mg/L	0.456	52.94	mg/L	0.456	0.86%
Ni 231.604†	4177.2	1.014	mg/L	0.0029	1.014	mg/L	0.0029	0.28%
Pb 220.353†	16450.2	2.057	mg/L	0.0166	2.057	mg/L	0.0166	0.81%
Sb 206.836†	7107.8	2.173	mg/L	0.0140	2.173	mg/L	0.0140	0.65%
Se 196.026†	2936.4	1.971	mg/L	0.0130	1.971	mg/L	0.0130	0.66%
Si 288.158†	4642.4	2.156	mg/L	0.0147	2.156	mg/L	0.0147	0.68%
Sn 189.927†	4022.3	1.033	mg/L	0.0084	1.033	mg/L	0.0084	0.81%
Sr 421.552†	918881.6	0.9809	mg/L	0.00872	0.9809	mg/L	0.00872	0.89%
Ti 334.903†	22717.1	1.089	mg/L	0.0084	1.089	mg/L	0.0084	0.77%
Tl 190.801†	5145.8	2.004	mg/L	0.0115	2.004	mg/L	0.0115	0.58%
V 292.402†	135813.7	1.042	mg/L	0.0100	1.042	mg/L	0.0100	0.96%
Zn 206.200†	4227.3	1.043	mg/L	0.0107	1.043	mg/L	0.0107	1.03%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/16/2012 10:36:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206241.1	97.74	%	1.512				1.55%
ScR 361.383	279930.4	97.90	%	1.042				1.06%
Ag 328.068†	69.2	0.00039	mg/L	0.000225	0.00039	mg/L	0.000225	57.53%
Al 308.215†	25.2	0.01412	mg/L	0.005460	0.01412	mg/L	0.005460	38.66%
As 188.979†	-2.9	-0.00153	mg/L	0.001874	-0.00153	mg/L	0.001874	122.61%
B 249.677†	11.8	0.00150	mg/L	0.000435	0.00150	mg/L	0.000435	28.95%
Ba 233.527†	2.1	0.00047	mg/L	0.001240	0.00047	mg/L	0.001240	264.99%
Be 313.042†	90.2	0.00014	mg/L	0.000045	0.00014	mg/L	0.000045	33.08%
Ca 317.933†	35.1	0.00247	mg/L	0.000666	0.00247	mg/L	0.000666	26.95%
Cd 228.802†	-8.8	-0.00027	mg/L	0.000119	-0.00027	mg/L	0.000119	44.28%
Co 228.616†	-19.3	-0.00055	mg/L	0.000083	-0.00055	mg/L	0.000083	15.04%
Cr 267.716†	-11.8	-0.00189	mg/L	0.000839	-0.00189	mg/L	0.000839	44.28%
Cu 324.752†	94.2	0.00036	mg/L	0.000074	0.00036	mg/L	0.000074	20.57%
Fe 273.955†	12.2	0.00929	mg/L	0.000626	0.00929	mg/L	0.000626	6.74%
K 766.490†	45.5	0.02285	mg/L	0.005779	0.02285	mg/L	0.005779	25.29%
Mg 279.077†	3.7	0.00253	mg/L	0.002254	0.00253	mg/L	0.002254	89.20%
Mn 257.610†	8.3	0.00023	mg/L	0.000162	0.00023	mg/L	0.000162	70.97%
Mo 202.031†	15.5	0.00077	mg/L	0.000227	0.00077	mg/L	0.000227	29.42%
Na 589.592†	23.5	0.00185	mg/L	0.002659	0.00185	mg/L	0.002659	144.05%
Na 330.237†	-14.7	-0.5103	mg/L	0.40102	-0.5103	mg/L	0.40102	78.58%
Ni 231.604†	-4.0	-0.00097	mg/L	0.002039	-0.00097	mg/L	0.002039	209.61%
Pb 220.353†	5.6	0.00070	mg/L	0.000472	0.00070	mg/L	0.000472	67.95%
Sb 206.836†	2.4	0.00076	mg/L	0.000608	0.00076	mg/L	0.000608	79.94%
Se 196.026†	0.9	0.00059	mg/L	0.003326	0.00059	mg/L	0.003326	561.48%
Si 288.158†	6.2	0.00288	mg/L	0.000784	0.00288	mg/L	0.000784	27.20%
Sn 189.927†	-1.1	-0.00028	mg/L	0.000451	-0.00028	mg/L	0.000451	159.08%
Sr 421.552†	87.2	0.00009	mg/L	0.000020	0.00009	mg/L	0.000020	21.73%
Ti 334.903†	14.1	0.00067	mg/L	0.000930	0.00067	mg/L	0.000930	137.81%
Tl 190.801†	-5.1	-0.00200	mg/L	0.002356	-0.00200	mg/L	0.002356	117.68%
V 292.402†	-37.1	-0.00029	mg/L	0.000145	-0.00029	mg/L	0.000145	49.85%
Zn 206.200†	-0.5	-0.00011	mg/L	0.000531	-0.00011	mg/L	0.000531	470.95%

Sequence No.: 24
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 10:40:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2194544.8	97.22	%	0.185				0.19%
ScR 361.383	278645.3	97.45	%	2.509				2.57%
Ag 328.068†	560.6	0.00317	mg/L	0.000037	0.00317	mg/L	0.000037	1.18%
Al 308.215†	106.1	0.05946	mg/L	0.003665	0.05946	mg/L	0.003665	6.16%
As 188.979†	94.2	0.05001	mg/L	0.001108	0.05001	mg/L	0.001108	2.22%
B 249.677†	162.9	0.02079	mg/L	0.000428	0.02079	mg/L	0.000428	2.06%
Ba 233.527†	13.3	0.00293	mg/L	0.000685	0.00293	mg/L	0.000685	23.41%
Be 313.042†	661.0	0.00099	mg/L	0.000074	0.00099	mg/L	0.000074	7.48%
Ca 317.933†	717.9	0.05054	mg/L	0.001905	0.05054	mg/L	0.001905	3.77%
Cd 228.802†	73.4	0.00199	mg/L	0.000087	0.00199	mg/L	0.000087	4.35%
Co 228.616†	105.9	0.00299	mg/L	0.000215	0.00299	mg/L	0.000215	7.20%
Cr 267.716†	26.0	0.00418	mg/L	0.000596	0.00418	mg/L	0.000596	14.26%
Cu 324.752†	648.9	0.00249	mg/L	0.000130	0.00249	mg/L	0.000130	5.23%
Fe 273.955†	75.6	0.05763	mg/L	0.001077	0.05763	mg/L	0.001077	1.87%
K 766.490†	1009.0	0.5062	mg/L	0.02489	0.5062	mg/L	0.02489	4.92%
Mg 279.077†	85.7	0.05812	mg/L	0.005315	0.05812	mg/L	0.005315	9.14%
Mn 257.610†	38.2	0.00106	mg/L	0.000107	0.00106	mg/L	0.000107	10.13%
Mo 202.031†	110.8	0.00552	mg/L	0.000073	0.00552	mg/L	0.000073	1.33%
Na 589.592†	6061.9	0.4758	mg/L	0.01122	0.4758	mg/L	0.01122	2.36%
Na 330.237†	2.4	0.08126	mg/L	0.354596	0.08126	mg/L	0.354596	436.35%
Ni 231.604†	35.0	0.00851	mg/L	0.001515	0.00851	mg/L	0.001515	17.80%
Pb 220.353†	174.9	0.02188	mg/L	0.001641	0.02188	mg/L	0.001641	7.50%
Sb 206.836†	178.5	0.05463	mg/L	0.001245	0.05463	mg/L	0.001245	2.28%
Se 196.026†	78.7	0.05284	mg/L	0.001904	0.05284	mg/L	0.001904	3.60%
Si 288.158†	137.1	0.06368	mg/L	0.004790	0.06368	mg/L	0.004790	7.52%
Sn 189.927†	37.3	0.00959	mg/L	0.001111	0.00959	mg/L	0.001111	11.58%
Sr 421.552†	906.3	0.00097	mg/L	0.000053	0.00097	mg/L	0.000053	5.49%
Ti 334.903†	111.6	0.00535	mg/L	0.000277	0.00535	mg/L	0.000277	5.19%
Tl 190.801†	124.3	0.04859	mg/L	0.000928	0.04859	mg/L	0.000928	1.91%
V 292.402†	385.7	0.00296	mg/L	0.000145	0.00296	mg/L	0.000145	4.89%
Zn 206.200†	36.9	0.00910	mg/L	0.000445	0.00910	mg/L	0.000445	4.89%

Sequence No.: 25
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 10:44:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2156626.1	95.54	%	0.438				0.46%
ScR 361.383	275282.3	96.28	%	0.489				0.51%
Ag 328.068†	-133.3	-0.00075	mg/L	0.000224	-0.00075	mg/L	0.000224	29.82%
Al 308.215†	362630.4	203.6	mg/L	0.14	203.6	mg/L	0.14	0.07%
As 188.979†	40.6	0.01576	mg/L	0.002516	0.01576	mg/L	0.002516	15.96%
B 249.677†	-21.0	-0.00267	mg/L	0.001853	-0.00267	mg/L	0.001853	69.29%
Ba 233.527†	139.9	-0.00162	mg/L	0.000210	-0.00162	mg/L	0.000210	12.94%
Be 313.042†	105.0	0.00016	mg/L	0.000030	0.00016	mg/L	0.000030	19.59%
Ca 317.933†	1446737.6	101.9	mg/L	0.16	101.9	mg/L	0.16	0.16%
Cd 228.802†	57.8	-0.00020	mg/L	0.000157	-0.00020	mg/L	0.000157	77.33%
Co 228.616†	61.5	-0.00085	mg/L	0.000230	-0.00085	mg/L	0.000230	27.00%
Cr 267.716†	4.8	-0.00151	mg/L	0.000889	-0.00151	mg/L	0.000889	59.09%
Cu 324.752†	-1974.4	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	25.63%
Fe 273.955†	259991.2	198.3	mg/L	0.35	198.3	mg/L	0.35	0.18%
K 766.490†	28.7	0.01438	mg/L	0.006419	0.01438	mg/L	0.006419	44.65%
Mg 279.077†	155846.5	105.6	mg/L	1.66	105.6	mg/L	1.66	1.58%
Mn 257.610†	27.6	0.00071	mg/L	0.000181	0.00071	mg/L	0.000181	25.37%
Mo 202.031†	57.5	0.00176	mg/L	0.000165	0.00176	mg/L	0.000165	9.33%
Na 589.592†	130.5	0.01024	mg/L	0.003638	0.01024	mg/L	0.003638	35.52%
Na 330.237†	-22.3	-0.7765	mg/L	0.13838	-0.7765	mg/L	0.13838	17.82%
Ni 231.604†	1.7	0.00042	mg/L	0.000176	0.00042	mg/L	0.000176	41.49%
Pb 220.353†	-316.5	0.00102	mg/L	0.001663	0.00102	mg/L	0.001663	163.24%
Sb 206.836†	26.8	0.00802	mg/L	0.001448	0.00802	mg/L	0.001448	18.05%
Se 196.026†	26.0	0.01742	mg/L	0.002816	0.01742	mg/L	0.002816	16.16%
Si 288.158†	-30.5	-0.00138	mg/L	0.003712	-0.00138	mg/L	0.003712	269.65%
Sn 189.927†	-83.0	-0.00869	mg/L	0.000514	-0.00869	mg/L	0.000514	5.92%
Sr 421.552†	3638.9	0.00388	mg/L	0.000074	0.00388	mg/L	0.000074	1.91%
Ti 334.903†	152.2	0.00244	mg/L	0.000552	0.00244	mg/L	0.000552	22.63%
Tl 190.801†	-64.7	-0.00413	mg/L	0.003476	-0.00413	mg/L	0.003476	84.06%
V 292.402†	1405.4	0.00380	mg/L	0.000376	0.00380	mg/L	0.000376	9.90%
Zn 206.200†	16.7	0.00412	mg/L	0.000579	0.00412	mg/L	0.000579	14.04%

Conc.

Sequence No.: 26
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 10:49:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227176.1	98.67	%	0.400				0.41%
ScR 361.383	275651.0	96.41	%	1.436				1.49%
Ag 328.068†	176615.4	0.9997	mg/L	0.00274	0.9997	mg/L	0.00274	0.27%
Al 308.215†	359661.8	201.9	mg/L	1.47	201.9	mg/L	1.47	0.73%
As 188.979†	1911.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.76%
B 249.677†	-9.7	-0.00334	mg/L	0.000583	-0.00334	mg/L	0.000583	17.45%
Ba 233.527†	4975.4	1.064	mg/L	0.0122	1.064	mg/L	0.0122	1.15%
Be 313.042†	649735.1	0.9768	mg/L	0.00231	0.9768	mg/L	0.00231	0.24%
Ca 317.933†	1451145.2	102.2	mg/L	0.29	102.2	mg/L	0.29	0.29%
Cd 228.802†	33114.8	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Co 228.616†	36106.3	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Cr 267.716†	6579.8	1.057	mg/L	0.0142	1.057	mg/L	0.0142	1.34%
Cu 324.752†	266365.5	1.032	mg/L	0.0050	1.032	mg/L	0.0050	0.48%
Fe 273.955†	260344.1	198.6	mg/L	1.06	198.6	mg/L	1.06	0.53%
K 766.490†	-16.3	-0.00817	mg/L	0.016399	-0.00817	mg/L	0.016399	200.84%
Mg 279.077†	150792.3	102.2	mg/L	0.48	102.2	mg/L	0.48	0.47%
Mn 257.610†	35986.7	0.9948	mg/L	0.00461	0.9948	mg/L	0.00461	0.46%
Mo 202.031†	47.2	0.00119	mg/L	0.000498	0.00119	mg/L	0.000498	41.79%
Na 589.592†	342.5	0.02688	mg/L	0.000553	0.02688	mg/L	0.000553	2.06%
Na 330.237†	-16.2	-0.8821	mg/L	0.10893	-0.8821	mg/L	0.10893	12.35%
Ni 231.604†	4063.8	0.9862	mg/L	0.01456	0.9862	mg/L	0.01456	1.48%
Pb 220.353†	7570.0	0.9869	mg/L	0.00426	0.9869	mg/L	0.00426	0.43%
Sb 206.836†	3433.5	1.039	mg/L	0.0012	1.039	mg/L	0.0012	0.11%
Se 196.026†	1486.3	0.9972	mg/L	0.00585	0.9972	mg/L	0.00585	0.59%
Si 288.158†	-34.5	0.00013	mg/L	0.001803	0.00013	mg/L	0.001803	>999.9%
Sn 189.927†	-87.2	-0.00923	mg/L	0.001031	-0.00923	mg/L	0.001031	11.18%
Sr 421.552†	3649.2	0.00390	mg/L	Conf. 0.000081	0.00390	mg/L	0.000081	2.08%
Ti 334.903†	150.9	0.00215	mg/L	0.000192	0.00215	mg/L	0.000192	8.90%
Tl 190.801†	2366.3	0.9373	mg/L	0.00224	0.9373	mg/L	0.00224	0.24%
V 292.402†	130937.5	0.9976	mg/L	0.00376	0.9976	mg/L	0.00376	0.38%
Zn 206.200†	3934.0	0.9704	mg/L	0.01123	0.9704	mg/L	0.01123	1.16%

Sequence No.: 27
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 11/16/2012 10:52:58 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2245873.8	99.50	%	0.811				0.82%
ScR 361.383	283315.6	99.09	%	0.306				0.31%
Ag 328.068†	174930.5	0.9902	mg/L	0.00619	0.9902	mg/L	0.00619	0.62%
Al 308.215†	3773.8	2.084	mg/L	0.0143	2.084	mg/L	0.0143	0.69%
As 188.979†	3729.4	1.999	mg/L	0.0206	1.999	mg/L	0.0206	1.03%
B 249.677†	7658.5	0.9765	mg/L	0.00295	0.9765	mg/L	0.00295	0.30%
Ba 233.527†	4847.2	1.068	mg/L	0.0052	1.068	mg/L	0.0052	0.49%
Be 313.042†	638772.9	0.9603	mg/L	0.00684	0.9603	mg/L	0.00684	0.71%
Ca 317.933†	28806.7	2.028	mg/L	0.0119	2.028	mg/L	0.0119	0.59%
Cd 228.802†	33460.4	1.044	mg/L	0.0067	1.044	mg/L	0.0067	0.64%
Co 228.616†	36612.0	1.036	mg/L	0.0038	1.036	mg/L	0.0038	0.37%
Cr 267.716†	6557.1	1.055	mg/L	0.0055	1.055	mg/L	0.0055	0.52%
Cu 324.752†	262464.5	1.009	mg/L	0.0050	1.009	mg/L	0.0050	0.50%
Fe 273.955†	2800.1	2.129	mg/L	0.0222	2.129	mg/L	0.0222	1.04%
K 766.490†	40043.1	20.09	mg/L	0.077	20.09	mg/L	0.077	0.38%
Mg 279.077†	3104.6	2.113	mg/L	0.0057	2.113	mg/L	0.0057	0.27%
Mn 257.610†	36428.0	1.007	mg/L	0.0046	1.007	mg/L	0.0046	0.46%
Mo 202.031†	20878.4	1.040	mg/L	0.0100	1.040	mg/L	0.0100	0.96%
Na 589.592†	624581.9	49.02	mg/L	0.298	49.02	mg/L	0.298	0.61%
Na 330.237†	1498.3	52.03	mg/L	0.230	52.03	mg/L	0.230	0.44%
Ni 231.604†	4145.1	1.006	mg/L	0.0047	1.006	mg/L	0.0047	0.46%
Pb 220.353†	16296.0	2.038	mg/L	0.0172	2.038	mg/L	0.0172	0.84%
Sb 206.836†	7007.4	2.142	mg/L	0.0215	2.142	mg/L	0.0215	1.00%
Se 196.026†	2913.8	1.956	mg/L	0.0143	1.956	mg/L	0.0143	0.73%
Si 288.158†	4550.0	2.113	mg/L	0.0054	2.113	mg/L	0.0054	0.26%
Sn 189.927†	3981.5	1.023	mg/L	0.0089	1.023	mg/L	0.0089	0.87%
Sr 421.552†	897817.7	0.9584	mg/L	0.00657	0.9584	mg/L	0.00657	0.69%
Ti 334.903†	21436.6	1.027	mg/L	0.0065	1.027	mg/L	0.0065	0.64%
Tl 190.801†	5089.8	1.982	mg/L	0.0182	1.982	mg/L	0.0182	0.92%
V 292.402†	133864.0	1.027	mg/L	0.0060	1.027	mg/L	0.0060	0.59%
Zn 206.200†	4224.6	1.042	mg/L	0.0062	1.042	mg/L	0.0062	0.60%

Sequence No.: 28
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 11/16/2012 10:57:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282848.4	101.1	%	0.71				0.70%
ScR 361.383	289522.5	101.3	%	0.80				0.79%
Ag 328.068†	49.8	0.00028	mg/L	0.000263	0.00028	mg/L	0.000263	93.38%
Al 308.215†	26.0	0.01462	mg/L	0.000506	0.01462	mg/L	0.000506	3.46%
As 188.979†	0.9	0.00048	mg/L	0.001711	0.00048	mg/L	0.001711	356.99%
B 249.677†	16.0	0.00204	mg/L	0.000799	0.00204	mg/L	0.000799	39.18%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000450	-0.00043	mg/L	0.000450	105.66%
Be 313.042†	122.5	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.37%
Ca 317.933†	75.1	0.00529	mg/L	0.000179	0.00529	mg/L	0.000179	3.38%
Cd 228.802†	-8.7	-0.00028	mg/L	0.000156	-0.00028	mg/L	0.000156	56.20%
Co 228.616†	-11.3	-0.00032	mg/L	0.000035	-0.00032	mg/L	0.000035	10.98%
Cr 267.716†	-7.4	-0.00119	mg/L	0.000597	-0.00119	mg/L	0.000597	50.09%
Cu 324.752†	104.1	0.00040	mg/L	0.000121	0.00040	mg/L	0.000121	30.32%
Fe 273.955†	15.4	0.01178	mg/L	0.000655	0.01178	mg/L	0.000655	5.56%
K 766.490†	-4.7	-0.00236	mg/L	0.024789	-0.00236	mg/L	0.024789	>999.9%
Mg 279.077†	8.8	0.00600	mg/L	0.002743	0.00600	mg/L	0.002743	45.75%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000105	-0.00001	mg/L	0.000105	867.35%
Mo 202.031†	9.7	0.00048	mg/L	0.000181	0.00048	mg/L	0.000181	37.62%
Na 589.592†	74.7	0.00586	mg/L	0.004456	0.00586	mg/L	0.004456	75.99%
Na 330.237†	-10.4	-0.3604	mg/L	0.24897	-0.3604	mg/L	0.24897	69.08%
Ni 231.604†	-2.7	-0.00066	mg/L	0.001049	-0.00066	mg/L	0.001049	159.46%
Pb 220.353†	8.2	0.00103	mg/L	0.000615	0.00103	mg/L	0.000615	59.87%
Sb 206.836†	6.2	0.00191	mg/L	0.001988	0.00191	mg/L	0.001988	103.96%
Se 196.026†	3.5	0.00238	mg/L	0.002705	0.00238	mg/L	0.002705	113.63%
Si 288.158†	-1.8	-0.00082	mg/L	0.004960	-0.00082	mg/L	0.004960	607.93%
Sn 189.927†	-3.7	-0.00095	mg/L	0.001088	-0.00095	mg/L	0.001088	114.08%
Sr 421.552†	128.0	0.00014	mg/L	0.000012	0.00014	mg/L	0.000012	8.70%
Ti 334.903†	15.5	0.00074	mg/L	0.000522	0.00074	mg/L	0.000522	70.17%
Tl 190.801†	1.3	0.00053	mg/L	0.000746	0.00053	mg/L	0.000746	141.10%
V 292.402†	-16.6	-0.00013	mg/L	0.000098	-0.00013	mg/L	0.000098	74.03%
Zn 206.200†	-0.3	-0.00008	mg/L	0.000713	-0.00008	mg/L	0.000713	853.61%

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 1 **of** 7

All corrections made by analyst unless otherwise noted. 11.15.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
Z		ZZZZZZ			~~2926-7~~
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{67}Zn high
		LR200			
		LR300			Ag low
		B1			
		B2			
		B3			
		CCV2			Mo low
		CCB2			
		VR31 MB1	SWN	20	
		1 MB1SPK	↓	1	✓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 2 of 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR31 A-L	SWN	100 ✓	~~fr Mn, Ba (500x)~~
		A		20	~~fr Mn, Ba 100x~~ (CAF)
		ADUP			Ni high RPD
		ASPK			Sb low %R
		APOST			0.01 mL PMS spk #2 (1/10) Sb 0 10mL PMS spk #1 (1/10)
		C			~~fr Mn, Ba 100x~~
		D			~~fr Mn 100x~~
		E			~~fr Mn, Ba 100x~~
		CCV3			
		CCB3			
		VR31 J	SWN	20	~~fr Mn 100x~~
		F		↓	↓
		H		↓	↓
		K		100	Mn Pb Zn
		K		20	
		L		↓	~~fr Mn 100x~~
		I		↓	↓
		G		↓	↓
		B		400	~~Mn Ba~~ Zn
		B	↓	20	
		CCV4			
		CCB4			
		VR30 MB1	SWN	20	
		↓ MB1SPK	↓	↓ ✓	

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 3 **of** 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 A-L	SWN	100 ✓	~~rr 1000x~~
		A		20	~~rr Mn, Ba 200x~~ (CAF)
		ADUP		✓	↓
		ASPK			PbSTL; Sb low'l R ~~rr Mn, Ba 200x~~
		APOST			Sb
		B			
		C			
		D			
		CCV5			
		CCB5			
		VR32 MB1	SWN	20	rr Be
		↓ MB1SPK		✓	
		VR30 E			
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV6			Be high, Mo low
		CCB6			As2 high
		STD O			
		CCV7			Be high. Ag, Mo low

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, November 15, 2012 11:25:14
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.1275
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns). 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3053.4	3053.360	71.071	2.3	Standard
	Mg	24.0	29322.9	29322.904	322.760	1.1	Standard
	In	114.9	78650.2	78650.220	497.933	0.6	Standard
	Pb	208.0	34955.6	34955.628	120.271	0.3	Standard
	U	238.1	61022.0	61022.015	440.425	0.7	Standard
⌈	CeO	155.9	1000.7	0.013	0.000	3.8	Standard
| >	Ce	139.9	76266.2	76266.222	634.937	0.8	Standard
⌊	Ce++	70.0	657.5	0.009	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/15/2012 11:25:12 AM
Time: 11/15/2012 11:27:47 AM

ly Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3053.36
Obtained Intensity (Mg 23.985): 29322.90
Obtained Intensity (In 114.904): 78650.22
Obtained Intensity (Pb 207.977): 34955.63
Obtained Intensity (U 238.05): 61022.02
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.013 (=1000.66 / 76266.22)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=657.49 / 76266.22)

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/15/2012 11:17:32 AM
Time: 11/15/2012 11:19:44 AM

s Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.708)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 11/15/2012 11:20:57 AM
d Time: 11/15/2012 11:25:08 AM

toLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 11:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L				726304	0
	Be	9		ug/L				5	53
	C	13		ug/L				58801	3
	Cl	37		ug/L				3025336	4
>	Sc	45		ug/L				671354	1
	V	51		ug/L				5156	3
	V-1	51		ug/L				130	18
	Cr	52		ug/L				15247	2
	Cr	53		ug/L				115	5
	Mn	55		ug/L				250	8
	Co	59		ug/L				40	11
>	Ge	72		ug/L				457613	0
	Ni	60		ug/L				22	30
	Ni	62		ug/L				29	10
	Cu	63		ug/L				58	22
	Cu	65		ug/L				28	19
	Zn	66		ug/L				143	10
	Zn	67		ug/L				23	23
	Zn	68		ug/L				137	9
	As	75		ug/L				267	5
	As-1	75		ug/L				8149	1
	Se	82		ug/L				-5	14
	Se	78		ug/L				8278	1
	Mo	98		ug/L				17	21
	Y	89		ug/L				298590	2
	Kr	83		ug/L				554	4
>	In	115		ug/L				979916	1
	Ag	107		ug/L				15	17
	Cd	111		ug/L				63	6
	Cd	114		ug/L				30	9
	Sb	121		ug/L				102	39
	Sb	123		ug/L				72	14
	Ba	135		ug/L				11	13
	Ba	137		ug/L				17	10
>	Tb	159		ug/L				1160798	1
	Tl	205		ug/L				51	19
	Pb	208		ug/L				139	3
	Bi	209		ug/L				2367270	0
	Th	232		ug/L				21	59
	U	238		ug/L				3	41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:03:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			726304	721999	0
	Be	**9**	**0.200**	ug/L	0 008	4	5	500	4
	C	**13**		ug/L			58801	61004	4
	Cl	**37**		ug/L			3025336	2900221	1
>	**Sc**	**45**		ug/L			671354	664677	2
	V	**51**	**0.200**	ug/L	0.030	14	5156	8058	3
	V-1	**51**	**0.200**	ug/L	0.013	6	130	2979	4
	Cr	**52**	**0.500**	ug/L	0.070	13	15247	21420	2
	Cr	**53**	**0.500**	ug/L	0.016	3	115	796	3
	Mn	**55**	**0.500**	ug/L	0.009	1	250	8460	2
	Co	**59**	**0.200**	ug/L	0.008	3	40	2660	0
>	**Ge**	**72**		ug/L			457613	458359	0
	Ni	**60**	**0.500**	ug/L	0.006	1	22	1424	1
	Ni	**62**	**0.500**	ug/L	0.031	6	29	219	5
	Cu	**63**	**0.500**	ug/L	0.003	0	58	3329	0
	Cu	**65**	**0.500**	ug/L	0.016	3	28	1508	2
	Zn	**66**	**4.000**	ug/L	0.074	1	143	7230	1
	Zn	**67**	**4.000**	ug/L	0.084	2	23	1119	2
	Zn	**68**	**4.000**	ug/L	0.105	2	137	5189	2
	As	**75**	**0.200**	ug/L	0.011	5	267	631	3
	As-1	**75**	**0.200**	ug/L	0.037	18	8149	8627	1
	Se	**82**	**0.500**	ug/L	0.027	5	-5	100	5
	Se	**78**	**0.500**	ug/L	0.090	17	8278	8635	1
	Mo	**98**	**0.200**	ug/L	0.006	2	17	886	2
	Y	**89**		ug/L			298590	302917	1
	Kr	**83**		ug/L			554	520	1
>	**In**	**115**		ug/L			979916	996805	0
	Ag	**107**	**0.200**	ug/L	0.001	0	15	3021	1
	Cd	**111**	**0.100**	ug/L	0.004	3	63	592	4
	Cd	**114**	**0.100**	ug/L	0.006	6	30	1237	6
	Sb	**121**	**0.200**	ug/L	0.006	2	102	3067	2
	Sb	**123**	**0.200**	ug/L	0.008	3	72	2282	3
	Ba	**135**	**0.500**	ug/L	0.004	0	11	2172	1
	Ba	**137**	**0.500**	ug/L	0.019	3	17	3761	3
>	**Tb**	**159**		ug/L			1160798	1148209	0
	Tl	**205**	**0.200**	ug/L	0.002	0	51	7419	0
	Pb	**208**	**0.100**	ug/L	0.001	0	139	5039	0
	Bi	**209**		ug/L			2367270	2396482	1
	Th	**232**	**0.200**	ug/L	0.003	1	21	8440	1
	U	**238**	**0.200**	ug/L	0.003	1	3	9178	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	716986	1
	Be	9	10.000	ug/L	0.111	1	5	23410	2
	C	13		ug/L			58801	59693	6
	Cl	37		ug/L			3025336	2984447	0
>	Sc	45		ug/L			671354	674326	1
	V	51	10.000	ug/L	0.329	3	5156	143597	4
	V-1	51	10.000	ug/L	0.247	2	130	139693	3
	Cr	52	9.998	ug/L	0.079	0	15247	135864	1
	Cr	53	10.000	ug/L	0.488	4	115	14104	3
	Mn	55	10.000	ug/L	0.102	1	250	167408	2
	Co	59	10.000	ug/L	0.402	4	40	131071	2
>	Ge	72		ug/L			457613	466494	1
	Ni	60	9.999	ug/L	0.357	3	22	27973	2
	Ni	62	10.001	ug/L	0.253	2	29	4073	1
	Cu	63	9.999	ug/L	0.466	4	58	64397	2
	Cu	65	9.999	ug/L	0.131	1	28	29424	0
	Zn	66	9.955	ug/L	0.279	2	143	17603	1
	Zn	67	10.070	ug/L	0.071	0	23	2958	2
	Zn	68	9.958	ug/L	0.281	2	137	12610	0
	As	75	9.999	ug/L	0.082	0	267	15856	1
	As-1	75	9.998	ug/L	0.137	1	8149	23661	0
	Se	82	9.994	ug/L	0.150	1	-5	1757	1
	Se	78	9.984	ug/L	0.305	3	8278	12676	0
	Mo	98	10.000	ug/L	0.223	2	17	46183	0
	Y	89		ug/L			298590	304853	1
	Kr	83		ug/L			554	549	4
>	In	115		ug/L			979916	992778	1
	Ag	107	10.000	ug/L	0.156	1	15	149069	0
	Cd	111	10.000	ug/L	0.103	1	63	50207	0
	Cd	114	10.000	ug/L	0.224	2	30	124907	1
	Sb	121	10.000	ug/L	0.138	1	102	155372	0
	Sb	123	10.000	ug/L	0.320	3	72	118774	1
	Ba	135	10.000	ug/L	0.135	1	11	43103	0
	Ba	137	10.000	ug/L	0.163	1	17	73732	0
>	Tb	159		ug/L			1160798	1162542	0
	Tl	205	10.000	ug/L	0.132	1	51	352078	1
	Pb	208	10.000	ug/L	0.169	1	139	470524	0
	Bi	209		ug/L			2367270	2386666	1
	Th	232	10.000	ug/L	0.184	1	21	436902	1
	U	238	10.000	ug/L	0.143	1	3	458868	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:11:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	707275	1
	Be	9	19.974	ug/L	0.190	0	5	45872	0
	C	13		ug/L			58801	57702	2
	Cl	37		ug/L			3025336	3009285	0
>	Sc	45		ug/L			671354	673020	0
	V	51	20.015	ug/L	0.101	0	5156	282424	0
	V-1	51	20.021	ug/L	0.178	0	130	280146	0
	Cr	52	19.955	ug/L	0.128	0	15247	253280	0
	Cr	53	19.977	ug/L	0.428	2	115	27892	2
	Mn	55	19.961	ug/L	0.737	3	250	330718	3
	Co	59	19.975	ug/L	0.174	0	40	260070	1
>	Ge	72		ug/L			457613	463277	1
	Ni	60	20.120	ug/L	0.373	1	22	57253	0
	Ni	62	19.957	ug/L	0.411	2	29	7978	3
	Cu	63	19.917	ug/L	0.856	4	58	125250	2
	Cu	65	19.971	ug/L	0.412	2	28	57994	0
	Zn	66	19.988	ug/L	0.667	3	143	34885	2
	Zn	67	19.876	ug/L	0.492	2	23	5653	0
	Zn	68	19.968	ug/L	1.162	5	137	24828	3
	As	75	20.031	ug/L	0.164	0	267	31464	1
	As-1	75	20.069	ug/L	0.097	0	8149	39286	1
	Se	82	19.982	ug/L	0.385	1	-5	3481	0
	Se	78	20.121	ug/L	0.349	1	8278	17074	1
	Mo	98	19.896	ug/L	0.749	3	17	89370	2
	Y	89		ug/L			298590	308237	0
	Kr	83		ug/L			554	552	4
>	In	115		ug/L			979916	989356	0
	Ag	107	19.915	ug/L	0.503	2	15	290934	3
	Cd	111	19.928	ug/L	0.229	1	63	98242	0
	Cd	114	19.906	ug/L	0.159	0	30	243250	1
	Sb	121	19.979	ug/L	0.171	0	102	307996	0
	Sb	123	19.936	ug/L	0.116	0	72	232976	0
	Ba	135	19.950	ug/L	0.042	0	11	84844	0
	Ba	137	19.946	ug/L	0.275	1	17	144984	0
>	Tb	159		ug/L			1160798	1165022	1
	Tl	205	19.967	ug/L	0.432	2	51	699768	0
	Pb	208	19.896	ug/L	0.367	1	139	918823	0
	Bi	209		ug/L			2367270	2348870	0
	Th	232	20.016	ug/L	0.421	2	21	879029	1
	U	238	19.921	ug/L	0.270	1	3	901701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			726304	696747	0
Be	9	49.897	ug/L	0.686	1	5	111740	1
C	13		ug/L			58801	54239	1
Cl	37		ug/L			3025336	3163386	3
Sc	45		ug/L			671354	669550	1
V	51	49.953	ug/L	0.938	1	5156	690266	1
V-1	51	49.924	ug/L	1.117	2	130	689391	1
Cr	52	49.941	ug/L	0.626	1	15247	604281	1
Cr	53	49.846	ug/L	1.163	2	115	68004	1
Mn	55	50.060	ug/L	0.708	1	250	829657	1
Co	59	49.981	ug/L	1.468	2	40	645933	1
Ge	72		ug/L			457613	451350	2
Ni	60	49.978	ug/L	0.690	1	22	138232	1
Ni	62	50.065	ug/L	1.302	2	29	19572	1
Cu	63	50.245	ug/L	0.142	0	58	315663	2
Cu	65	50.084	ug/L	1.326	2	28	142830	0
Zn	66	49.801	ug/L	0.242	0	143	82900	2
Zn	67	49.945	ug/L	2.045	4	23	13735	4
Zn	68	50.018	ug/L	0.646	1	137	60532	1
As	75	50.171	ug/L	0.732	1	267	77698	0
As-1	75	50.217	ug/L	1.030	2	8149	85364	0
Se	82	50.031	ug/L	0.981	1	-5	8527	0
Se	78	50.209	ug/L	1.763	3	8278	29743	0
Mo	98	50.165	ug/L	1.652	3	17	223173	1
Y	89		ug/L			298590	300790	2
Kr	83		ug/L			554	563	5
In	115		ug/L			979916	968693	1
Ag	107	49.690	ug/L	0.746	1	15	689235	0
Cd	111	49.942	ug/L	0.972	1	63	239540	0
Cd	114	49.889	ug/L	0.348	0	30	590254	0
Sb	121	49.991	ug/L	0.730	1	102	753665	0
Sb	123	49.934	ug/L	0.921	1	72	567409	1
Ba	135	50.037	ug/L	0.678	1	11	209096	0
Ba	137	50.124	ug/L	0.813	1	17	361169	0
Tb	159		ug/L			1160798	1161518	0
Tl	205	49.835	ug/L	0.270	0	51	1713158	0
Pb	208	49.789	ug/L	0.286	0	139	2245124	0
Bi	209		ug/L			2367270	2294195	0
Th	232	49.756	ug/L	0.366	0	21	2126922	0
U	238	49.645	ug/L	0.102	0	3	2163987	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:22:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	687365	3
	Be	9	98.884	ug/L	2.897	2	5	210487	0
	C	13		ug/L			58801	57400	3
	Cl	37		ug/L			3025336	3210120	1
>	Sc	45		ug/L			671354	654119	1
	V	51	100.575	ug/L	3.378	3	5156	1378884	2
	V-1	51	100.357	ug/L	3.857	3	130	1369972	2
	Cr	52	100.804	ug/L	0.438	0	15247	1208550	1
	Cr	53	100.092	ug/L	1.590	1	115	133715	0
	Mn	55	100.259	ug/L	0.882	0	250	1637308	1
	Co	59	100.111	ug/L	2.851	2	40	1268759	1
>	Ge	72		ug/L			457613	455029	0
	Ni	60	99.662	ug/L	1.501	1	22	274842	1
	Ni	62	99.528	ug/L	1.748	1	29	38602	1
	Cu	63	99.316	ug/L	1.591	1	58	614945	1
	Cu	65	99.163	ug/L	0.649	0	28	277436	0
	Zn	66	99.507	ug/L	1.250	1	143	164160	0
	Zn	67	99.083	ug/L	1.389	1	23	26643	1
	Zn	68	99.192	ug/L	1.199	1	137	117753	1
	As	75	99.617	ug/L	0.859	0	267	153343	0
	As-1	75	99.658	ug/L	0.850	0	8149	161104	0
	Se	82	99.163	ug/L	0.830	0	-5	16586	0
	Se	78	99.322	ug/L	0.696	0	8278	50334	0
	Mo	98	99.526	ug/L	0.646	0	17	439613	0
	Y	89		ug/L			298590	300499	0
	Kr	83		ug/L			554	599	2
>	In	115		ug/L			979916	944524	0
	Ag	107	99.198	ug/L	2.226	2	15	1306740	1
	Cd	111	99.485	ug/L	1.704	1	63	457400	1
	Cd	114	99.730	ug/L	1.497	1	30	1140177	0
	Sb	121	99.787	ug/L	0.890	0	102	1456513	0
	Sb	123	100.284	ug/L	0.778	0	72	1121824	1
	Ba	135	100.151	ug/L	0.666	0	11	410163	1
	Ba	137	100.195	ug/L	1.139	1	17	708572	0
>	Tb	159		ug/L			1160798	1140586	0
	Tl	205	99.199	ug/L	0.492	0	51	3261597	0
	Pb	208	99.379	ug/L	0.874	0	139	4311163	0
	Bi	209		ug/L			2367270	2201217	0
	Th	232	99.564	ug/L	1.210	1	21	4119387	0
	U	238	99.488	ug/L	0.549	0	3	4186821	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:29:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	697054	2
	Be	9	0.004	ug/L	0 003	64	5	14	37
	C	13		ug/L			58801	54932	2
	Cl	37		ug/L			3025336	3115327	1
>	Sc	45		ug/L			671354	652960	2
	V	51	0.033	ug/L	0.012	36	5156	5458	1
	V-1	51	0.012	ug/L	0.005	38	130	294	19
	Cr	52	0.099	ug/L	0.033	33	15247	15991	0
	Cr	53	0.032	ug/L	0.009	27	115	155	5
	Mn	55	0.007	ug/L	0.005	72	250	350	20
	Co	59	0.004	ug/L	0.004	106	40	85	56
>	Ge	72		ug/L			457613	460060	0
	Ni	60	0.003	ug/L	0.006	196	22	31	51
	Ni	62	0.105	ug/L	0.039	36	29	71	21
	Cu	63	0.009	ug/L	0.004	44	58	116	22
	Cu	65	0.003	ug/L	0.003	113	28	37	25
	Zn	66	-0.011	ug/L	0.007	63	143	126	9
	Zn	67	0.013	ug/L	0.024	184	23	27	23
	Zn	68	-0.001	ug/L	0.004	252	137	136	3
	As	75	0.004	ug/L	0.012	319	267	275	6
	As-1	75	0.156	ug/L	0.030	19	8149	8435	0
	Se	82	0.079	ug/L	0.042	52	-5	8	87
	Se	78	0.569	ug/L	0.090	15	8278	8567	0
	Mo	98	0.029	ug/L	0.008	27	17	145	24
	Y	89		ug/L			298590	298582	0
	Kr	83		ug/L			554	524	4
>	In	115		ug/L			979916	957945	0
	Ag	107	0.007	ug/L	0.005	67	15	104	58
	Cd	111	0.009	ug/L	0.005	52	63	104	21
	Cd	114	0.004	ug/L	0.003	69	30	77	43
	Sb	121	0.111	ug/L	0.008	7	102	1736	7
	Sb	123	0.115	ug/L	0.007	5	72	1374	5
	Ba	135	0.004	ug/L	0.004	105	11	26	59
	Ba	137	0.004	ug/L	0.006	124	17	48	81
>	Tb	159		ug/L			1160798	1096676	2
	Tl	205	0.022	ug/L	0.003	12	51	732	9
	Pb	208	0.006	ug/L	0.008	124	139	390	81
	Bi	209		ug/L			2367270	2301499	1
	Th	232	0.136	ug/L	0.032	23	21	5414	22
	U	238	0.007	ug/L	0.006	93	3	270	90

Sample Information

Sample Date/Time: Thursday, November 15, 2012 12:29:30
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9998**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.021	0.20	10	20	50	100
V-1	51	**1.0000**	0.021	0.20	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Co	59	**1.0000**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.010	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.029	0.20	10	20	50	100
Pb	208	**0.9999**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.036	0.20	10	20	50	100
U	238	**0.9999**	0.037	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICV~~ 222222
Sample Dil Factor: 11.15.12 MJT
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:37:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas Intens.	Intens. RSD
Li	6		ug/L			0	690107	0
Be	9	53.146	ug/L	0.766	1	0	113655	2
C	13		ug/L			0	58734	1
Cl	37		ug/L			0	3218935	3
Sc	45		ug/L			0	672341	1
V	51	51.135	ug/L	1.411	2	0	718001	1
V-1	51	51.269	ug/L	1.224	2	0	719375	1
Cr	52	51.116	ug/L	1.808	3	0	621996	2
Cr	53	51.554	ug/L	1.461	2	0	70724	1
Mn	55	50.623	ug/L	0.324	0	0	849591	0
Co	59	50.494	ug/L	1.283	2	0	657818	2
Ge	72		ug/L			0	469528	2
Ni	60	51.045	ug/L	1.012	1	0	145194	1
Ni	62	50.392	ug/L	0.923	1	0	20146	1
Cu	63	50.431	ug/L	1.704	3	0	322032	2
Cu	65	51.674	ug/L	1.650	3	0	149088	1
Zn	66	49.950	ug/L	1.747	3	0	84910	1
Zn	67	51.040	ug/L	2.180	4	0	14137	1
Zn	68	49.942	ug/L	0.951	1	0	61094	2
As	75	49.536	ug/L	0.730	1	0	78525	1
As-1	75	54.687	ug/L	0.896	1	0	86610	1
Se	82	77.809	ug/L	2.086	2	0	13427	0
Se	78	97.432	ug/L	2.602	2	0	42596	0
Mo	98	47.414	ug/L	1.368	2	0	216012	1
Y	89		ug/L			0	303652	0
Kr	83		ug/L			0	553	2
In	115		ug/L			0	972119	1
Ag	107	49.472	ug/L	0.758	1	0	670726	1
Cd	111	49.450	ug/L	0.135	0	0	233986	1
Cd	114	49.954	ug/L	0.778	1	0	587773	1
Sb	121	49.688	ug/L	0 336	0	0	746416	1
Sb	123	49.378	ug/L	1.080	2	0	568383	1
Ba	135	50.653	ug/L	0.778	1	0	213478	0
Ba	137	50.086	ug/L	0.201	0	0	364553	0
Tb	159		ug/L			0	1145568	0
Tl	205	52.835	ug/L	0.080	0	0	1744757	0
Pb	208	52.193	ug/L	0.627	1	0	2273959	0
Bi	209		ug/L			0	2233958	1
Th	232	52.401	ug/L	0.533	1	0	2177561	0
U	238	53.356	ug/L	0.280	0	0	2255260	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:45:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679842	0
	Be	9	52.033	ug/L	0.897	1	5	109609	1
	C	13		ug/L			58801	58588	3
	Cl	37		ug/L			3025336	3137156	1
>	Sc	45		ug/L			671354	663548	1
	V	51	50.369	ug/L	1.559	3	5156	703055	2
	V-1	51	51.026	ug/L	1.308	2	130	706690	1
	Cr	52	49.148	ug/L	1.798	3	15247	605277	2
	Cr	53	51.294	ug/L	1.325	2	115	69558	1
	Mn	55	49.800	ug/L	1.636	3	250	824882	1
	Co	59	50.757	ug/L	1.909	3	40	652468	2
>	Ge	72		ug/L			457613	473522	2
	Ni	60	49.094	ug/L	1.705	3	22	140845	3
	Ni	62	49.307	ug/L	0.997	2	29	19910	1
	Cu	63	49.414	ug/L	1.923	3	58	318202	1
	Cu	65	49.824	ug/L	1.135	2	28	145015	0
	Zn	66	49.078	ug/L	2.006	4	143	84273	1
	Zn	67	49.714	ug/L	2.289	4	23	13910	1
	Zn	68	48.338	ug/L	1.365	2	137	59753	0
	As	75	49.141	ug/L	2.527	5	267	78784	2
	As-1	75	49.011	ug/L	2.500	5	8149	86664	2
	Se	82	76.836	ug/L	3.394	4	-5	13361	1
	Se	78	76.378	ug/L	3.306	4	8278	42232	1
	Mo	98	46.387	ug/L	2.488	5	17	213021	2
	Y	89		ug/L			298590	300868	2
	Kr	83		ug/L			554	563	4
>	In	115		ug/L			979916	953436	0
	Ag	107	48.913	ug/L	0.733	1	15	650479	2
	Cd	111	49.593	ug/L	0.101	0	63	230208	0
	Cd	114	49.704	ug/L	0.452	0	30	573631	0
	Sb	121	49.579	ug/L	0.247	0	102	730567	1
	Sb	123	49.446	ug/L	0.673	1	72	558346	1
	Ba	135	50.215	ug/L	0.617	1	11	207610	2
	Ba	137	50.215	ug/L	0.489	0	17	358504	1
>	Tb	159		ug/L			1160798	1132838	0
	Tl	205	52.259	ug/L	0.886	1	51	1706490	1
	Pb	208	51.235	ug/L	0.802	1	139	2207482	0
	Bi	209		ug/L			2367270	2236728	0
	Th	232	51.732	ug/L	1.328	2	21	2125707	1
	U	238	52.606	ug/L	1.153	2	3	2198678	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	669243	2
	Be	9	0.004	ug/L	0.004	115	5	13	66
	C	13		ug/L			58801	54183	1
	Cl	37		ug/L			3025336	3033736	1
>	Sc	45		ug/L			671354	641399	1
	V	51	0.023	ug/L	0.011	47	5156	5231	2
	V-1	51	0.006	ug/L	0.003	43	130	205	15
	Cr	52	0.079	ug/L	0.025	32	15247	15481	0
	Cr	53	0.024	ug/L	0.013	53	115	142	10
	Mn	55	0.004	ug/L	0.003	60	250	307	11
	Co	59	0.002	ug/L	0.002	92	40	59	32
>	Ge	72		ug/L			457613	463989	2
	Ni	60	-0.000	ug/L	0.002	32711	22	23	23
	Ni	62	0.122	ug/L	0.014	11	29	78	5
	Cu	63	0.010	ug/L	0.004	46	58	119	22
	Cu	65	-0.001	ug/L	0.001	94	28	25	9
	Zn	66	-0.004	ug/L	0 003	63	143	137	2
	Zn	67	-0.009	ug/L	0.008	92	23	21	11
	Zn	68	-0.002	ug/L	0.005	240	137	136	4
	As	75	-0.008	ug/L	0.038	451	267	257	20
	As-1	75	0.092	ug/L	0.158	173	8149	8401	0
	Se	82	-0.008	ug/L	0.105	1266	-5	-7	252
	Se	78	0.354	ug/L	0.540	152	8278	8543	0
	Mo	98	0.012	ug/L	0.001	11	17	69	9
	Y	89		ug/L			298590	293125	0
	Kr	83		ug/L			554	562	1
>	In	115		ug/L			979916	951777	1
	Ag	107	0.002	ug/L	0.001	39	15	41	26
	Cd	111	0.003	ug/L	0.001	21	63	76	2
	Cd	114	0.001	ug/L	0.002	109	30	46	40
	Sb	121	0.027	ug/L	0.006	23	102	491	17
	Sb	123	0.029	ug/L	0.006	19	72	393	15
	Ba	135	0.004	ug/L	0.009	200	11	29	122
	Ba	137	0.004	ug/L	0.007	167	17	47	109
>	Tb	159		ug/L			1160798	1078092	1
	Tl	205	0.009	ug/L	0.007	76	51	314	62
	Pb	208	0.005	ug/L	0.007	138	139	324	82
	Bi	209		ug/L			2367270	2257219	0
	Th	232	0.067	ug/L	0.010	14	21	2631	12
	U	238	0.004	ug/L	0.004	88	3	165	84

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:58:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	672643	1
	Be	9	51.640	ug/L	1.204	2	5	107647	3
	C	13		ug/L			58801	54915	2
	Cl	37		ug/L			3025336	3145302	2
>	Sc	45		ug/L			671354	649221	1
	V	51	49.830	ug/L	0.563	1	5156	680651	0
	V-1	51	50.212	ug/L	0.923	1	130	680465	1
	Cr	52	50.260	ug/L	1.406	2	15247	605352	2
	Cr	53	51.510	ug/L	1.619	3	115	68345	2
	Mn	55	50.304	ug/L	0.454	0	250	815413	0
	Co	59	51.786	ug/L	0.231	0	40	651516	1
>	Ge	72		ug/L			457613	459939	1
	Ni	60	50.470	ug/L	1.372	2	22	140653	1
	Ni	62	49.846	ug/L	0.648	1	29	19555	0
	Cu	63	51.230	ug/L	2.106	4	58	320542	2
	Cu	65	51.245	ug/L	1 016	1	28	144908	0
	Zn	66	49.705	ug/L	1.726	3	143	82938	2
	Zn	67	51.199	ug/L	1.131	2	23	13926	2
	Zn	68	51.268	ug/L	0.740	1	137	61576	0
	As	75	49.582	ug/L	1.100	2	267	77269	1
	As-1	75	50.018	ug/L	0.989	1	8149	85799	1
	Se	82	49.834	ug/L	1.549	3	-5	8420	1
	Se	78	51.372	ug/L	1.242	2	8278	30327	0
	Mo	98	48.399	ug/L	0.835	1	17	216091	2
	Y	89		ug/L			298590	298621	0
	Kr	83		ug/L			554	557	5
>	In	115		ug/L			979916	938906	1
	Ag	107	47.685	ug/L	0.692	1	15	624431	1
	Cd	111	50.910	ug/L	0.097	0	63	232717	1
	Cd	114	50.700	ug/L	1.020	2	30	576141	1
	Sb	121	50.246	ug/L	0.821	1	102	728986	0
	Sb	123	49.941	ug/L	1.037	2	72	555258	1
	Ba	135	50.622	ug/L	1.064	2	11	206045	0
	Ba	137	50.218	ug/L	1.309	2	17	352955	1
>	Tb	159		ug/L			1160798	1111509	1
	Tl	205	51.733	ug/L	0.826	1	51	1657421	0
	Pb	208	51.292	ug/L	0.795	1	139	2168210	0
	Bi	209		ug/L			2367270	2215073	0
	Th	232	50.837	ug/L	0.534	1	21	2049675	0
	U	238	52.131	ug/L	1.387	2	3	2137564	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:05:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	673300 ✓	0
	Be	**9**	**0.002**	ug/L	0.001	33	5	8	13
	C	**13**		ug/L			58801	56331	3
	Cl	**37**		ug/L			3025336	3054027	1
>	**Sc**	**45**		ug/L			671354	643550 ✓	1
	V	**51**	**0.024**	ug/L	0.008	32	5156	5265	2
	V-1	**51**	**0.002**	ug/L	0.001	56	130	158	13
	Cr	**52**	**0.080**	ug/L	0.037	46	15247	15550	3
	Cr	**53**	**0.010**	ug/L	0.012	122	115	124	13
	Mn	**55**	**0.003**	ug/L	0.002	54	250	285	10
	Co	**59**	**0.001**	ug/L	0.000	56	40	46	10
>	**Ge**	**72**		ug/L			457613	454935 ✓	1
	Ni	**60**	**0.004**	ug/L	0.007	182	22	33	60
	Ni	**62**	**0.143**	ug/L	0.038	26	29	85	18
	Cu	**63**	**0.009**	ug/L	0.001	8	58	113	5
	Cu	**65**	**0.001**	ug/L	0.004	298	28	32	36
	Zn	**66**	**-0.010**	ug/L	0.008	80	143	125	9
	Zn	**67**	**-0.004**	ug/L	0.013	290	23	22	15
	Zn	**68**	**-0.006**	ug/L	0.005	84	137	129	2
	As	**75**	**-0.012**	ug/L	0.007	57	267	248	5
	As-1	**75**	**0.278**	ug/L	0.134	48	8149	8526	1
	Se	**82**	**-0.055**	ug/L	0.059	107	-5	-14	67
	Se	**78**	**1.018**	ug/L	0.490	48	8278	8659	1
	Mo	**98**	**0.016**	ug/L	0.002	14	17	86	11
	Y	**89**		ug/L			298590	293139	1
	Kr	**83**		ug/L			554	565	5
>	**In**	**115**		ug/L			979916	934887 ✓	0
	Ag	**107**	**0.002**	ug/L	0 001	30	15	45	20
	Cd	**111**	**0.005**	ug/L	0.003	61	63	81	16
	Cd	**114**	**0.002**	ug/L	0.001	61	30	51	26
	Sb	**121**	**0.067**	ug/L	0.006	8	102	1068	8
	Sb	**123**	**0.066**	ug/L	0.007	10	72	796	9
	Ba	**135**	**0.002**	ug/L	0.001	27	11	21	12
	Ba	**137**	**0.001**	ug/L	0.001	156	17	22	42
>	**Tb**	**159**		ug/L			1160798	1068831 ✓	0
	Tl	**205**	**0.006**	ug/L	0.002	28	51	218	22
	Pb	**208**	**0.001**	ug/L	0.001	81	139	162	16
	Bi	**209**		ug/L			2367270	2233301	1
	Th	**232**	**0.113**	ug/L	0.016	13	21	4384	13
	U	**238**	**0.002**	ug/L	0.000	21	3	80	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:09:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			726304	664724	1
	Be	**9**	**0.218**	ug/L	0.013	6	5	453	5
	C	**13**		ug/L			58801	56361	3
	Cl	**37**		ug/L			3025336	2995308	2
>	**Sc**	**45**		ug/L			671354	647077	3
	V	**51**	**0.232**	ug/L	0.023	9	5156	8106	1
	V-1	**51**	**0.208**	ug/L	0.013	6	130	2938	3
	Cr	**52**	**0.610**	ug/L	0.062	10	15247	21826	0
	Cr	**53**	**0.532**	ug/L	0.023	4	115	813	0
	Mn	**55**	**0.520**	ug/L	0.023	4	250	8637	2
	Co	**59**	**0.214**	ug/L	0.013	6	40	2718	3
>	**Ge**	**72**		ug/L			457613	451418	1
	Ni	**60**	**0.520**	ug/L	0.014	2	22	1445	1
	Ni	**62**	**0.662**	ug/L	0.059	8	29	283	7
	Cu	**63**	**0.541**	ug/L	0.007	1	58	3380	2
	Cu	**65**	**0.550**	ug/L	0.030	5	28	1553	6
	Zn	**66**	**4.418**	ug/L	0.132	2	143	7364	2
	Zn	**67**	**4.073**	ug/L	0.109	2	23	1108	1
	Zn	**68**	**4.349**	ug/L	0.026	0	137	5250	1
	As	**75**	**0.190**	ug/L	0.018	9	267	553	5
	As-1	**75**	**0.540**	ug/L	0.025	4	8149	8861	1
	Se	**82**	**0.584**	ug/L	0.048	8	-5	91	9
	Se	**78**	**1.794**	ug/L	0.117	6	8278	8920	1
	Mo	**98**	**0.193**	ug/L	0.006	3	17	863	3
	Y	**89**		ug/L			298590	296537	0
	Kr	**83**		ug/L			554	517	1
>	**In**	**115**		ug/L			979916	943085	1
	Ag	**107**	**0.202**	ug/L	0.005	2	15	2676	1
	Cd	**111**	**0.115**	ug/L	0.009	7	63	588	6
	Cd	**114**	**0.107**	ug/L	0.005	4	30	1252	5
	Sb	**121**	**0.213**	ug/L	0.007	3	102	3206	2
	Sb	**123**	**0.215**	ug/L	0.003	1	72	2471	0
	Ba	**135**	**0.511**	ug/L	0.022	4	11	2099	3
	Ba	**137**	**0.493**	ug/L	0.006	1	17	3497	1
>	**Tb**	**159**		ug/L			1160798	1071843	1
	Tl	**205**	**0.222**	ug/L	0.004	1	51	6896	0
	Pb	**208**	**0.116**	ug/L	0.004	3	139	4848	1
	Bi	**209**		ug/L			2367270	2241773	0
	Th	**232**	**0.260**	ug/L	0.007	2	21	10131	1
	U	**238**	**0.219**	ug/L	0.005	2	3	8666	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:13:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	657521	1
	Be	9	0.000	ug/L	0.001	971	5	5	39
	C	13		ug/L			58801	113952	2
	Cl	37		ug/L			3025336	8335589	2
>	Sc	45		ug/L			671354	664054	2
	V	51	0.068	ug/L	0.032	47	5156	6048	8
	V-1	51	1.416	ug/L	0.043	3	130	19751	0
	Cr	52	0.596	ug/L	0.030	5	15247	22239	1
	Cr	53	5.006	ug/L	0.187	3	115	6895	1
	Mn	55	0.047	ug/L	0.004	7	250	1033	3
	Co	59	0.021	ug/L	0.001	3	40	307	1
>	Ge	72		ug/L			457613	442144	1
	Ni	60	0.343	ug/L	0.014	4	22	941	3
	Ni	62	2.875	ug/L	0.551	19	29	1109	17
	Cu	63	0.946	ug/L	0.047	4	58	5742	3
	Cu	65	0.305	ug/L	0.024	8	28	855	6
	Zn	66	0.896	ug/L	0.009	1	143	1572	0
	Zn	67	6.568	ug/L	0.015	0	23	1737	1
	Zn	68	0.398	ug/L	0.021	5	137	590	2
	As	75	0.049	ug/L	0.058	119	267	331	25
	As-1	75	0.468	ug/L	0.102	21	8149	8570	0
	Se	82	-0.219	ug/L	0.106	48	-5	-41	43
	Se	78	1.645	ug/L	0.274	16	8278	8675	0
	Mo	98	417.302	ug/L	10.636	2	17	1790660	1
	Y	89		ug/L			298590	294224	1
	Kr	83		ug/L			554	719	5
>	In	115		ug/L			979916	944291	1
	Ag	107	0.026	ug/L	0.002	7	15	350	6
	Cd	111	0.113	ug/L	0.014	12	63	580	11
	Cd	114	0.266	ug/L	0.002	0	30	3070	0
	Sb	121	0.070	ug/L	0.003	4	102	1126	4
	Sb	123	0.073	ug/L	0.003	4	72	883	5
	Ba	135	0.051	ug/L	0.003	6	11	219	6
	Ba	137	0.041	ug/L	0.002	5	17	309	5
>	Tb	159		ug/L			1160798	1158938	1
	Tl	205	0.036	ug/L	0.001	2	51	1249	2
	Pb	208	0.031	ug/L	0.001	3	139	1493	3
	Bi	209		ug/L			2367270	2140693	0
	Th	232	0.234	ug/L	0.129	55	21	9824	53
	U	238	0.002	ug/L	0.000	18	3	70	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:19:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	650871 ✓	1
	Be	9	0.001	ug/L	0.001	167	5	6	32
	C	13		ug/L			58801	113109	1
	Cl	37		ug/L			3025336	8133764	2
>	Sc	45		ug/L			671354	649064 ✓	1
	V	51	0.067	ug/L	0.164	243	5156	5874	36
	V-1	51	1.481	ug/L	0.048	3	130	20184	1
	Cr	52	20.105	ug/L	0.697	3	15247	250901	1
	Cr	53	24.778	ug/L	0.349	1	115	32928	0
	Mn	55	19.515	ug/L	0.173	0	250	316411	0
	Co	59	19.846	ug/L	0.342	1	40	249666	2
>	Ge	72		ug/L			457613	434992 ✓	1
	Ni	60	20.342	ug/L	0.279	1	22	53640	1
	Ni	62	23.807	ug/L	0.494	2	29	8848	1
	Cu	63	20.600	ug/L	0.126	0	58	121985	1
	Cu	65	20.475	ug/L	0.552	2	28	54772	1
	Zn	66	20.028	ug/L	0.288	1	143	31692	0
	Zn	67	24.416	ug/L	0.108	0	23	6293	0
	Zn	68	18.434	ug/L	0.234	1	137	21023	0
	As	75	19.377	ug/L	0.169	0	267	28716	0
	As-1	75	19.980	ug/L	0.202	1	8149	37068	0
	Se	82	-0.204	ug/L	0.108	52	-5	-37	46
	Se	78	2.215	ug/L	0.164	7	8278	8766	0
	Mo	98	420.975	ug/L	13.426	3	17	1777102	1
	Y	89		ug/L			298590	291174	0
	Kr	83		ug/L			554	682	6
>	In	115		ug/L			979916	947542 ✓	1
	Ag	107	20.273	ug/L	0.411	2	15	267896	1
	Cd	111	19.776	ug/L	0.253	1	63	91272	1
	Cd	114	19.879	ug/L	0.241	1	30	228016	0
	Sb	121	0.069	ug/L	0.004	5	102	1115	4
	Sb	123	0.071	ug/L	0.002	2	72	869	1
	Ba	135	0.050	ug/L	0.000	0	11	217	1
	Ba	137	0.045	ug/L	0.002	3	17	334	3
>	Tb	159		ug/L			1160798	1159475 ✓	1
	Tl	205	0.033	ug/L	0.003	8	51	1142	6
	Pb	208	0.033	ug/L	0.000	1	139	1588	0
	Bi	209		ug/L			2367270	2159771	0
	Th	232	0.072	ug/L	0.019	26	21	3041	26
	U	238	0.000	ug/L	0.000	12	3	23	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:26:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	609319	1
	Be	9	206.077	ug/L	3.482	1	5	389040	1
	C	13		ug/L			58801	55833	0
	Cl	37		ug/L			3025336	3189014	2
>	Sc	45		ug/L			671354	602641	1
	V	51	195.948	ug/L	7.680	3	5156	2470524	2
	V-1	51	199.129	ug/L	7.737	3	130	2504225	2
	Cr	52	195.961	ug/L	4.733	2	15247	2151167	1
	Cr	53	206.364	ug/L	5.092	2	115	253859	1
	Mn	55	195.404	ug/L	3.233	1	250	2939491	1
	Co	59	200.405	ug/L	6.381	3	40	2339954	2
>	Ge	72		ug/L			457613	425535	0
	Ni	60	198.985	ug/L	2.180	1	22	513113	0
	Ni	62	198.880	ug/L	1.683	0	29	72115	1
	Cu	63	200.571	ug/L	1.648	0	58	1161356	0
	Cu	65	199.425	ug/L	4.286	2	28	521708	1
	Zn	66	194.570	ug/L	5.667	2	143	300077	3
	Zn	67	199.674	ug/L	5.517	2	23	50182	2
	Zn	68	191.986	ug/L	2.160	1	137	213004	0
	As	75	197.213	ug/L	2.875	1	267	283637	0
	As-1	75	197.476	ug/L	2.860	1	8149	291090	0
	Se	82	194.359	ug/L	2.528	1	-5	30405	0
	Se	78	195.440	ug/L	2.980	1	8278	85172	1
	Mo	98	202.854	ug/L	4.196	2	17	837990	2
	Y	89		ug/L			298590	282070	2
	Kr	83		ug/L			554	661	0
>	In	115		ug/L			979916	910337	2
	Ag	107	185.645	ug/L	3.522	1	15	2356522	0
	Cd	111	197.211	ug/L	2.645	1	63	873743	0
	Cd	114	192.799	ug/L	3.502	1	30	2124127	1
	Sb	121	196.719	ug/L	3.933	1	102	2766689	0
	Sb	123	197.492	ug/L	4.290	2	72	2128579	0
	Ba	135	207.938	ug/L	4.721	2	11	820519	0
	Ba	137	207.000	ug/L	4.826	2	17	1410525	0
>	Tb	159		ug/L			1160798	1104780	0
	Tl	205	197.430	ug/L	1.709	0	51	6287827	1
	Pb	208	196.838	ug/L	1.394	0	139	8270727	0
	Bi	209		ug/L			2367270	2090096	1
	Th	232	201.470	ug/L	1.463	0	21	8074015	0
	U	238	201.287	ug/L	3.374	1	3	8204463	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:33:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			726304	577075	2
	Be	9	306.409	ug/L	13.494	4	5	547527	2
	C	13		ug/L			58801	55076	2
	Cl	37		ug/L			3025336	3162904	4
>	Sc	45		ug/L			671354	612226	1
	V	51	283.797	ug/L	9.660	3	5156	3632748	1
	V-1	51	289.290	ug/L	8.982	3	130	3695831	1
	Cr	52	282.229	ug/L	7.460	2	15247	3141339	1
	Cr	53	300.191	ug/L	3.095	1	115	375145	0
	Mn	55	281.724	ug/L	4.653	1	250	4305097	0
	Co	59	293.242	ug/L	0.943	0	40	3478953	1
>	Ge	72		ug/L			457613	422819	1
	Ni	60	290.818	ug/L	8.256	2	22	745163	3
	Ni	62	299.097	ug/L	5.548	1	29	107725	0
	Cu	63	291.362	ug/L	2.585	0	58	1676304	1
	Cu	65	293.934	ug/L	6.524	2	28	763966	1
	Zn	66	282.337	ug/L	7.145	2	143	432483	1
	Zn	67	289.816	ug/L	6.451	2	23	72355	0
	Zn	68	280.385	ug/L	0.872	0	137	309043	1
	As	75	292.245	ug/L	0.429	0	267	417538	1
	As-1	75	294.389	ug/L	2.060	0	8149	427505	1
	Se	82	278.441	ug/L	5.430	1	-5	43279	1
	Se	78	286.376	ug/L	5.724	1	8278	120435	1
	Mo	98	288.631	ug/L	5.818	2	17	1184544	1
	Y	89		ug/L			298590	273325	1
	Kr	83		ug/L			554	740	5
>	In	115		ug/L			979916	863682	0
	Ag	107	257.877	ug/L	12.200	4	15	3106982	5
	Cd	111	292.348	ug/L	4.398	1	63	1229105	2
	Cd	114	287.278	ug/L	3.540	1	30	3003373	1
	Sb	121	294.235	ug/L	2.356	0	102	3927140	1
	Sb	123	293.233	ug/L	2.550	0	72	2999273	0
	Ba	135	317.752	ug/L	2.211	0	11	1189941	1
	Ba	137	309.519	ug/L	2.815	0	17	2001559	0
>	Tb	159		ug/L			1160798	1089373	0
	Tl	205	292.709	ug/L	4.715	1	51	9191409	1
	Pb	208	286.234	ug/L	3.533	1	139	11858836	0
	Bi	209		ug/L			2367270	1988062	0
	Th	232	295.250	ug/L	3.596	1	21	11667334	0
	U	238	297.492	ug/L	3.924	1	3	11957127	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:40:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	615194	3
	Be	9	0.003	ug/L	0.003	93	5	10	53
	C	13		ug/L			58801	54586	1
	Cl	37		ug/L			3025336	3096695	3
>	Sc	45		ug/L			671354	611140	0
	V	51	0.038	ug/L	0.010	26	5156	5184	2
	V-1	51	0.012	ug/L	0.001	8	130	267	4
	Cr	52	0.139	ug/L	0.031	22	15247	15413	1
	Cr	53	0.051	ug/L	0.007	13	115	169	4
	Mn	55	0.021	ug/L	0.001	4	250	546	2
	Co	59	0.002	ug/L	0.000	21	40	63	8
>	Ge	72		ug/L			457613	448126	0
	Ni	60	0.022	ug/L	0.002	8	22	82	6
	Ni	62	0.801	ug/L	0.094	11	29	334	10
	Cu	63	0.067	ug/L	0.007	11	58	468	9
	Cu	65	0.022	ug/L	0.003	14	28	87	9
	Zn	66	1.043	ug/L	0.030	2	143	1833	2
	Zn	67	1.049	ug/L	0.095	9	23	300	7
	Zn	68	1.045	ug/L	0 024	2	137	1354	2
	As	75	-0.008	ug/L	0.032	384	267	249	18
	As-1	75	0.414	ug/L	0.077	18	8149	8605	0
	Se	82	0.012	ug/L	0.040	335	-5	-3	197
	Se	78	1.501	ug/L	0.228	15	8278	8733	0
	Mo	98	0.053	ug/L	0.007	13	17	246	13
	Y	89		ug/L			298590	286909	2
	Kr	83		ug/L			554	524	4
>	In	115		ug/L			979916	914244	1
	Ag	107	0.007	ug/L	0.002	27	15	106	23
	Cd	111	0.011	ug/L	0.002	19	63	109	7
	Cd	114	0.005	ug/L	0.000	8	30	79	6
	Sb	121	0.289	ug/L	0.028	9	102	4176	8
	Sb	123	0.298	ug/L	0.027	8	72	3292	7
	Ba	135	0.012	ug/L	0.002	19	11	58	14
	Ba	137	0.011	ug/L	0.002	14	17	93	10
>	Tb	159		ug/L			1160798	1059904	0
	Tl	205	0.040	ug/L	0.014	35	51	1254	33
	Pb	208	0.009	ug/L	0.001	6	139	506	5
	Bi	209		ug/L			2367270	2213777	1
	Th	232	0.176	ug/L	0.025	14	21	6781	14
	U	238	0.005	ug/L	0.001	11	3	210	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:46:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619916	1
	Be	9	0.001	ug/L	0.003	301	5	6	82
	C	13		ug/L			58801	55312	1
	Cl	37		ug/L			3025336	3021845	2
>	Sc	45		ug/L			671354	605160	3
	V	51	0.032	ug/L	0.019	58	5156	5045	1
	V-1	51	0.009	ug/L	0.001	10	130	234	1
	Cr	52	0.117	ug/L	0.062	52	15247	15005	1
	Cr	53	0.043	ug/L	0.012	27	115	157	9
	Mn	55	0.030	ug/L	0.002	6	250	684	3
	Co	59	0.002	ug/L	0.002	94	40	63	41
>	Ge	72		ug/L			457613	442941	1
	Ni	60	0.031	ug/L	0.007	24	22	103	17
	Ni	62	0.557	ug/L	0.044	7	29	239	7
	Cu	63	0.049	ug/L	0.001	2	58	354	1
	Cu	65	0.017	ug/L	0.004	24	28	74	14
	Zn	66	1.371	ug/L	0.046	3	143	2337	3
	Zn	67	1.215	ug/L	0 068	5	23	340	6
	Zn	68	1.322	ug/L	0.028	2	137	1658	2
	As	75	-0.003	ug/L	0.014	478	267	255	8
	As-1	75	0.332	ug/L	0.124	37	8149	8382	1
	Se	82	-0.012	ug/L	0.037	300	-5	-7	83
	Se	78	1.186	ug/L	0.441	37	8278	8501	0
	Mo	98	0.017	ug/L	0.005	28	17	89	23
	Y	89		ug/L			298590	286549	0
	Kr	83		ug/L			554	531	1
>	In	115		ug/L			979916	917489	0
	Ag	107	0.003	ug/L	0.000	9	15	56	6
	Cd	111	0.006	ug/L	0.002	34	63	86	11
	Cd	114	0.002	ug/L	0.001	27	30	52	12
	Sb	121	0.084	ug/L	0.007	8	102	1281	7
	Sb	123	0.085	ug/L	0.012	14	72	985	12
	Ba	135	0.018	ug/L	0.002	11	11	81	9
	Ba	137	0.014	ug/L	0.002	17	17	115	13
>	Tb	159		ug/L			1160798	1062534	0
	Tl	205	0.022	ug/L	0.011	51	51	713	47
	Pb	208	0.010	ug/L	0.000	2	139	548	2
	Bi	209		ug/L			2367270	2213394	0
	Th	232	0.066	ug/L	0.003	4	21	2557	5
	U	238	0.002	ug/L	0.000	3	3	71	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:52:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641603	1
	Be	9	0.001	ug/L	0.002	129	5	7	45
	C	13		ug/L			58801	56930	4
	Cl	37		ug/L			3025336	3060608	1
>	Sc	45		ug/L			671354	611885	0
	V	51	0.030	ug/L	0.002	6	5156	5085	0
	V-1	51	0.006	ug/L	0.001	19	130	198	7
	Cr	52	0.112	ug/L	0.009	7	15247	15135	0
	Cr	53	0.034	ug/L	0.008	24	115	147	6
	Mn	55	0.013	ug/L	0.001	9	250	424	4
	Co	59	0.002	ug/L	0.000	14	40	61	5
>	Ge	72		ug/L			457613	449443	0
	Ni	60	0.024	ug/L	0.005	21	22	86	14
	Ni	62	0.436	ug/L	0.036	8	29	196	7
	Cu	63	0.037	ug/L	0.002	4	58	283	4
	Cu	65	0.011	ug/L	0.004	33	28	57	16
	Zn	66	0.740	ug/L	0.051	6	143	1344	5
	Zn	67	0.727	ug/L	0.042	5	23	216	5
	Zn	68	0.758	ug/L	0.024	3	137	1022	2
	As	75	0.012	ug/L	0.020	169	267	280	11
	As-1	75	0.213	ug/L	0.052	24	8149	8326	0
	Se	82	0.084	ug/L	0.042	50	-5	8	80
	Se	78	0.745	ug/L	0.238	31	8278	8442	0
	Mo	98	0.011	ug/L	0.003	31	17	63	23
	Y	89		ug/L			298590	284306	2
	Kr	83		ug/L			554	509	6
>	In	115		ug/L			979916	922948	1
	Ag	107	0.003	ug/L	0.002	60	15	55	44
	Cd	111	0.003	ug/L	0.003	121	63	71	19
	Cd	114	0.004	ug/L	0.002	68	30	68	39
	Sb	121	0.042	ug/L	0.005	11	102	696	9
	Sb	123	0.043	ug/L	0.005	11	72	535	9
	Ba	135	0.011	ug/L	0.004	41	11	53	32
	Ba	137	0.009	ug/L	0.000	2	17	81	2
>	Tb	159		ug/L			1160798	1075302	0
	Tl	205	0.014	ug/L	0.004	28	51	470	25
	Pb	208	0.008	ug/L	0.001	16	139	451	11
	Bi	209		ug/L			2367270	2229145	1
	Th	232	0.047	ug/L	0.007	15	21	1860	14
	U	238	0.001	ug/L	0.001	62	3	59	58

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:56:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	629463 ✓	1
	Be	9	52.179	ug/L	2.220	4	5	101728	2
	C	13		ug/L			58801	52038	1
	Cl	37		ug/L			3025336	3115060	1
>	Sc	45		ug/L			671354	629930 ✓	1
	V	51	48.870	ug/L	0.634	1	5156	647808	0
	V-1	51	48.942	ug/L	0.592	1	130	643582	0
	Cr	52	49.933	ug/L	0.545	1	15247	583698	0
	Cr	53	50.172	ug/L	0.410	0	115	64606	1
	Mn	55	48.989	ug/L	1.592	3	250	770446	2
	Co	59	50.515	ug/L	1.603	3	40	616810	4
>	Ge	72		ug/L			457613	455134 ✓	0
	Ni	60	48.271	ug/L	0.443	0	22	133154	1
	Ni	62	48.036	ug/L	1.413	2	29	18649	2
	Cu	63	49.005	ug/L	0.631	1	58	303515	0
	Cu	65	49.250	ug/L	0.691	1	28	137826	0
	Zn	66	49.059	ug/L	0.414	0	143	81025	0
	Zn	67	51.214	ug/L	0.658	1	23	13786	1
	Zn	68	49.331	ug/L	1.310	2	137	58639	2
	As	75	48.124	ug/L	0.684	1	267	74227	0
	As-1	75	48.456	ug/L	0.685	1	8149	82510	0
	Se	82	48.316	ug/L	0 418	0	-5	8080	0
	Se	78	49.379	ug/L	1.031	2	8278	29169	1
	Mo	98	43.992	ug/L	0.468	1	17	194359	0
	Y	89		ug/L			298590	285118	1
	Kr	83		ug/L			554	497	1
>	In	115		ug/L			979916	914653 ✓	1
	Ag	107	45.825	ug/L	0 786	1	15	584636	2
	Cd	111	51.074	ug/L	1.115	2	63	227403	1
	Cd	114	50.255	ug/L	0.373	0	30	556416	1
	Sb	121	50.817	ug/L	1.023	2	102	718236	0
	Sb	123	50.401	ug/L	1.077	2	72	545938	1
	Ba	135	50.858	ug/L	0.836	1	11	201681	0
	Ba	137	50.512	ug/L	1.379	2	17	345881	1
>	Tb	159		ug/L			1160798	1089830 ✓	0
	Tl	205	51.441	ug/L	0.276	0	51	1616139	0
	Pb	208	50.891	ug/L	0.418	0	139	2109517	0
	Bi	209		ug/L			2367270	2186484	0
	Th	232	51.048	ug/L	0.973	1	21	2018213	2
	U	238	52.240	ug/L	0.016	0	3	2100659	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:03:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619987 ✓	0
	Be	9	0.000	ug/L	0.001	417	5	5	39
	C	13		ug/L			58801	52087	4
	Cl	37		ug/L			3025336	3065436	1
>	Sc	45		ug/L			671354	613071 ✓	0
	V	51	0.025	ug/L	0.016	65	5156	5026	3
	V-1	51	0.003	ug/L	0.000	9	130	153	2
	Cr	52	0.084	ug/L	0.048	56	15247	14853	2
	Cr	53	0.011	ug/L	0.006	55	115	120	7
	Mn	55	0.004	ug/L	0.001	15	250	296	4
	Co	59	0.001	ug/L	0.001	101	40	45	19
>	Ge	72		ug/L			457613	435471 ✓	0
	Ni	60	0.000	ug/L	0.002	3944	22	21	22
	Ni	62	0.389	ug/L	0.019	4	29	172	3
	Cu	63	0.024	ug/L	0.001	3	58	197	3
	Cu	65	-0.000	ug/L	0.002	1731	28	27	16
	Zn	66	-0.005	ug/L	0.002	38	143	128	2
	Zn	67	0.017	ug/L	0.024	136	23	27	23
	Zn	68	0.006	ug/L	0.015	265	137	136	12
	As	75	-0.001	ug/L	0.018	1417	267	253	10
	As-1	75	0.366	ug/L	0.108	29	8149	8292	0
	Se	82	0.000	ug/L	0.041	26221	-5	-5	128
	Se	78	1.335	ug/L	0.417	31	8278	8418	1
	Mo	98	0.017	ug/L	0.005	33	17	86	26
	Y	89		ug/L			298590	280176	1
	Kr	83		ug/L			554	531	8
>	In	115		ug/L			979916	903574 ✓	1
	Ag	107	0.002	ug/L	0.000	7	15	44	4
	Cd	111	0.006	ug/L	0.003	48	63	85	14
	Cd	114	0.002	ug/L	0.001	29	30	50	13
	Sb	121	0.078	ug/L	0.008	10	102	1185	10
	Sb	123	0.079	ug/L	0.011	13	72	913	13
	Ba	135	0.000	ug/L	0.001	255	11	11	19
	Ba	137	0.000	ug/L	0.000	64	17	18	11
>	Tb	159		ug/L			1160798	1049952 ✓	0
	Tl	205	0.009	ug/L	0.003	39	51	310	33
	Pb	208	0.001	ug/L	0.000	14	139	174	3
	Bi	209		ug/L			2367270	2199190	0
	Th	232	0.105	ug/L	0.016	15	21	4015	15
	U	238	0.002	ug/L	0.000	12	3	72	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	634669	1
	Be	9	0.001	ug/L	0.001	52	5	7	19
	C	13		ug/L			58801	57096	0
	Cl	37		ug/L			3025336	3080979	1
>	Sc	45		ug/L			671354	621749	0
	V	51	0.041	ug/L	0.015	36	5156	5306	3
	V-1	51	0.002	ug/L	0.001	47	130	143	7
	Cr	52	0.126	ug/L	0.042	32	15247	15544	3
	Cr	53	-0.001	ug/L	0.007	509	115	105	8
	Mn	55	0.017	ug/L	0.001	4	250	490	2
	Co	59	0.001	ug/L	0.000	22	40	49	5
>	Ge	72		ug/L			457613	448808	2
	Ni	60	0.003	ug/L	0.005	202	22	29	47
	Ni	62	0.350	ug/L	0.037	10	29	162	6
	Cu	63	0.032	ug/L	0.004	11	58	254	7
	Cu	65	0.016	ug/L	0.001	7	28	71	4
	Zn	66	0.149	ug/L	0.008	5	143	382	5
	Zn	67	0.161	ug/L	0.039	24	23	66	18
	Zn	68	0.168	ug/L	0.017	10	137	330	4
	As	75	-0.026	ug/L	0.024	92	267	223	13
	As-1	75	0.282	ug/L	0.081	28	8149	8416	1
	Se	82	-0.048	ug/L	0.035	71	-5	-13	45
	Se	78	1.038	ug/L	0.267	25	8278	8551	1
	Mo	98	0.006	ug/L	0.002	36	17	40	19
	Y	89		ug/L			298590	289535	1
	Kr	83		ug/L			554	531	4
>	In	115		ug/L			979916	930087	1
	Ag	107	0.002	ug/L	0.000	17	15	34	9
	Cd	111	0.005	ug/L	0.002	50	63	80	11
	Cd	114	0.002	ug/L	0.000	21	30	46	7
	Sb	121	0.029	ug/L	0.004	13	102	519	10
	Sb	123	0.030	ug/L	0.004	14	72	399	12
	Ba	135	0.004	ug/L	0.001	30	11	28	17
	Ba	137	0.004	ug/L	0.000	12	17	41	7
>	Tb	159		ug/L			1160798	1076174	0
	Tl	205	0.007	ug/L	0.003	43	51	256	35
	Pb	208	0.002	ug/L	0.000	13	139	229	5
	Bi	209		ug/L			2367270	2231253	0
	Th	232	0.123	ug/L	0.026	20	21	4831	20
	U	238	0.001	ug/L	0.000	7	3	34	6

VR31 - 20231

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	641814	1
	Be	9	26.263	ug/L	0.843	3	5	52222	2
	C	13		ug/L			58801	53288	1
	Cl	37		ug/L			3025336	3055405	2
>	Sc	45		ug/L			671354	630484	0
	V	51	25.819	ug/L	0.241	0	5156	344883	1
	V-1	51	25.904	ug/L	0.296	1	130	341042	2
	Cr	52	26.456	ug/L	0.248	0	15247	316265	0
	Cr	53	26.735	ug/L	0.265	0	115	34509	1
	Mn	55	26.583	ug/L	0.132	0	250	418605	0
	Co	59	26.248	ug/L	0.372	1	40	320697	1
>	Ge	72		ug/L			457613	461330	0
	Ni	60	25.874	ug/L	0.297	1	22	72351	0
	Ni	62	26.080	ug/L	0.153	0	29	10277	0
	Cu	63	26.070	ug/L	0.451	1	58	163710	1
	Cu	65	26.015	ug/L	0.199	0	28	73815	1
	Zn	66	81.720	ug/L	0.448	0	143	136715	0
	Zn	67	77.963	ug/L	2.808	3	23	21261	4
	Zn	68	78.751	ug/L	1.236	1	137	94803	1
	As	75	24.716	ug/L	0.366	1	267	38775	1
	As-1	75	24.876	ug/L	0.658	2	8149	46933	1
	Se	82	78.606	ug/L	0.836	1	-5	13329	1
	Se	78	79.212	ug/L	1.205	1	8278	42387	1
	Mo	98	22.353	ug/L	0.066	0	17	100117	0
	Y	89		ug/L			298590	294680	2
	Kr	83		ug/L			554	511	5
>	In	115		ug/L			979916	932376	2
	Ag	107	24.217	ug/L	0.718	2	15	314797	0
	Cd	111	25.109	ug/L	0.607	2	63	113967	0
	Cd	114	25.528	ug/L	0.923	3	30	287983	1
	Sb	121	25.405	ug/L	0.521	2	102	366028	0
	Sb	123	25.135	ug/L	0 848	3	72	277466	1
	Ba	135	26.346	ug/L	0.712	2	11	106473	0
	Ba	137	25.758	ug/L	0.561	2	17	179781	0
>	Tb	159		ug/L			1160798	1088396	1
	Tl	205	27.441	ug/L	0 369	1	51	860919	0
	Pb	208	27.177	ug/L	0.337	1	139	1125021	0
	Bi	209		ug/L			2367270	2259344	0
	Th	232	27.067	ug/L	0.548	2	21	1068581	1
	U	238	27.065	ug/L	0.354	1	3	1086886	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~cr Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	673538 ✓	1
	Be	**9**	**0.218**	ug/L	0.008	3	5	460	4
	C	**13**		ug/L			58801	58284	2
	Cl	**37**		ug/L			3025336	3079334	2
>	**Sc**	**45**		ug/L			671354	650187 ✓	1
	V	**51**	**6.992**	ug/L	0.042	0	5156	99953	1
	V-1	**51**	**7.024**	ug/L	0.052	0	130	95456	2
	Cr	**52**	**5.532**	ug/L	0.136	2	15247	79867	1
	Cr	**53**	**5.633**	ug/L	0.069	1	115	7586	2
	Mn	**55**	**186.614**	ug/L	1.028	0	250	3028956	1
	Co	**59**	**2.068**	ug/L	0.033	1	40	26088	1
>	**Ge**	**72**		ug/L			457613	465896 ✓	0
	Ni	**60**	**5.404**	ug/L	0.144	2	22	15279	2
	Ni	**62**	**5.587**	ug/L	0.067	1	29	2247	1
	Cu	**63**	**4.374**	ug/L	0 064	1	58	27785	1
	Cu	**65**	**4.409**	ug/L	0.037	0	28	12657	0
	Zn	**66**	**27.038**	ug/L	0.376	1	143	45778	1
	Zn	**67**	**30.940**	ug/L	0.700	2	23	8534	2
	Zn	**68**	**29.433**	ug/L	0.197	0	137	35871	0
	As	**75**	**2.424**	ug/L	0 048	1	267	4085	1
	As-1	**75**	**2.421**	ug/L	0.032	1	8149	12102	0
	Se	**82**	**0.047**	ug/L	0.108	228	-5	2	701
	Se	**78**	**0.026**	ug/L	0.062	235	8278	8440	0
	Mo	**98**	**0.083**	ug/L	0.002	2	17	390	2
	Y	**89**		ug/L			298590	322444	1
	Kr	**83**		ug/L			554	561	5
>	**In**	**115**		ug/L			979916	936450 ✓	1
	Ag	**107**	**0.039**	ug/L	0.004	10	15	529	8
	Cd	**111**	**0.208**	ug/L	0.008	3	63	1006	1
	Cd	**114**	**0.181**	ug/L	0.003	1	30	2077	1
	Sb	**121**	**0.042**	ug/L	0.004	10	102	708	7
	Sb	**123**	**0.039**	ug/L	0.005	12	72	501	8
	Ba	**135**	**85.653**	ug/L	1.840	2	11	347701	0
	Ba	**137**	**84.132**	ug/L	0.712	0	17	589864	0
>	**Tb**	**159**		ug/L			1160798	1111161 ✓	1
	Tl	**205**	**0.039**	ug/L	0.002	3	51	1313	4
	Pb	**208**	**10.359**	ug/L	0.181	1	139	437841	0
	Bi	**209**		ug/L			2367270	2245097	0
	Th	**232**	**1.168**	ug/L	0.076	6	21	47089	5
	U	**238**	**0.253**	ug/L	0.003	1	3	10395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT
CK Mn, Ba

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			726304	672130	2
Be	9	1.016	ug/L	0.058	5	5	2118	3
C	13		ug/L			58801	72062	3
Cl	37		ug/L			3025336	3089820	2
Sc	45		ug/L			671354	685586	1
V	51	33.349	ug/L	0.675	2	5156	482761	1
V-1	51	33.559	ug/L	0.632	1	130	480291	0
Cr	52	26.294	ug/L	0.627	2	15247	341857	1
Cr	53	26.965	ug/L	0.642	2	115	37840	1
Mn	55	875.615	ug/L	22.956	2	250	14982253	1
Co	59	9.816	ug/L	0.325	3	40	130408	2
Ge	72		ug/L			457613	454915	0
Ni	60	26.090	ug/L	0.392	1	22	71942	1
Ni	62	28.941	ug/L	0.839	2	29	11242	2
Cu	63	21.319	ug/L	0.445	2	58	132024	2
Cu	65	22.099	ug/L	0.280	1	28	61838	1
Zn	66	130.811	ug/L	2.985	2	143	215724	2
Zn	67	150.801	ug/L	0.804	0	23	40527	1
Zn	68	144.061	ug/L	1.028	0	137	170908	0
As	75	12.009	ug/L	0.187	1	267	18714	1
As-1	75	12.105	ug/L	0.223	1	8149	26680	1
Se	82	~~-0.229~~	ug/L	0.092	40	-5	-43	35
Se	78	0.706	ug/L	0 235	33	8278	8529	1
Mo	98	0.359	ug/L	0.002	0	17	1600	0
Y	89		ug/L			298590	440007	2
Kr	83		ug/L			554	887	4
In	115		ug/L			979916	933421	1
Ag	107	~~0.194~~	ug/L	0.006	2	15	2543	1
Cd	111	1.044	ug/L	0.035	3	63	4802	2
Cd	114	0.874	ug/L	0.012	1	30	9902	1
Sb	121	~~0.078~~	ug/L	0.002	2	102	1220	3
Sb	123	0.074	ug/L	0.002	3	72	891	3
Ba	135	430.813	ug/L	4.832	1	11	1743387	0
Ba	137	416.844	ug/L	4.701	1	17	2913016	0
Tb	159		ug/L			1160798	1136635	1
Tl	205	~~0.171~~	ug/L	0.002	1	51	5654	1
Pb	208	50.482	ug/L	0.666	1	139	2182268	0
Bi	209		ug/L			2367270	2191684	0
Th	232	4.809	ug/L	0.021	0	21	198308	0
U	238	1.232	ug/L	0.013	1	3	51666	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:24:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ar Mn, Ba~~
11.16.12 MJD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	681780	2
	Be	9	0.984	ug/L	0.044	4	5	2083	3
	C	13		ug/L			58801	71989	1
	Cl	37		ug/L			3025336	3106861	2
>	Sc	45		ug/L			671354	708845	0
	V	51	32.204	ug/L	0.435	1	5156	482266	1
	V-1	51	32.441	ug/L	0.438	1	130	480133	1
	Cr	52	29.573	ug/L	0.512	1	15247	395580	1
	Cr	53	30.344	ug/L	0.266	0	115	44018	1
	Mn	55	907.916	ug/L	8.268	0	250	16065415	0
	Co	59	9.492	ug/L	0.199	2	40	130423	2
>	Ge	72		ug/L			457613	455525	1
	Ni	60	32.368	ug/L	0.885	2	22	89353	1
	Ni	62	34.005	ug/L	0.285	0	29	13222	0
	Cu	63	21.709	ug/L	0.442	2	58	134587	0
	Cu	65	22.242	ug/L	0.374	1	28	62310	0
	Zn	66	130.736	ug/L	0.723	0	143	215868	0
	Zn	67	150.822	ug/L	3.545	2	23	40578	1
	Zn	68	141.740	ug/L	4.005	2	137	168349	1
	As	75	11.358	ug/L	0.129	1	267	17738	0
	As-1	75	11.434	ug/L	0.179	1	8149	25682	0
	Se	82	< -0.258	ug/L	0.108	41	-5	-48	38
	Se	78	0.604	ug/L	0.301	49	8278	8496	1
	Mo	98	0.329	ug/L	0.032	9	17	1471	8
	Y	89		ug/L			298590	437201	0
	Kr	83		ug/L			554	888	6
>	In	115		ug/L			979916	933694	1
	Ag	107	< 0.190	ug/L	0 006	3	15	2489	2
	Cd	111	1.085	ug/L	0.034	3	63	4991	3
	Cd	114	0.889	ug/L	0.009	0	30	10080	0
	Sb	121	< 0.072	ug/L	0.003	3	102	1139	3
	Sb	123	0.071	ug/L	0.003	4	72	855	3
	Ba	135	420.311	ug/L	6.647	1	11	1701386	0
	Ba	137	406.648	ug/L	8.208	2	17	2842494	0
>	Tb	159		ug/L			1160798	1130467	1
	Tl	205	< 0.167	ug/L	0.005	2	51	5482	3
	Pb	208	48.463	ug/L	0.536	1	139	2083637	0
	Bi	209		ug/L			2367270	2180455	0
	Th	232	4.631	ug/L	0.088	1	21	189897	1
	U	238	1.224	ug/L	0.022	1	3	51053	0

ICP-MS Quantitative Analysis - Summary Report

FK MA BOT 11.16.12 MJT

Sample ID: VR31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			726304	670483	1
	Be	**9**	**26.029**	ug/L	0.308	1	5	54077	1
	C	**13**		ug/L			58801	71566	2
	Cl	**37**		ug/L			3025336	3092990	1
>	**Sc**	**45**		ug/L			671354	700272	2
	V	**51**	**58.339**	ug/L	0.744	1	5156	858558	1
	V-1	**51**	**58.782**	ug/L	0.820	1	130	859142	1
	Cr	**52**	**47.711**	ug/L	1.369	2	15247	620458	0
	Cr	**53**	**49.135**	ug/L	1.696	3	115	70298	0
	Mn	**55**	**888.814**	ug/L	41.923	4	250	15524293	2
	Co	**59**	**32.325**	ug/L	0.741	2	40	438556	1
>	**Ge**	**72**		ug/L			457613	447621	3
	Ni	**60**	**50.592**	ug/L	2.634	5	22	137074	1
	Ni	**62**	**52.436**	ug/L	2.669	5	29	19996	2
	Cu	**63**	**47.659**	ug/L	2.501	5	58	289946	1
	Cu	**65**	**48.932**	ug/L	3.126	6	28	134470	2
	Zn	**66**	**216.103**	ug/L	8.958	4	143	350212	1
	Zn	**67**	**230.839**	ug/L	6.949	3	23	60987	1
	Zn	**68**	**222.531**	ug/L	11.257	5	137	259364	1
	As	**75**	**35.810**	ug/L	1.919	5	267	54321	1
	As-1	**75**	**36.172**	ug/L	2.157	5	8149	62518	1
	Se	**82**	**74.015**	ug/L	3.614	4	-5	12162	1
	Se	**78**	**76.044**	ug/L	4.571	6	8278	39759	0
	Mo	**98**	**20.222**	ug/L	0.770	3	17	87798	0
	Y	**89**		ug/L			298590	440169	0
	Kr	**83**		ug/L			554	886	0
>	**In**	**115**		ug/L			979916	929357	2
	Ag	**107**	**21.758**	ug/L	0.258	1	15	282010	1
	Cd	**111**	**25.458**	ug/L	0.295	1	63	115201	1
	Cd	**114**	**25.195**	ug/L	0.560	2	30	283383	1
	Sb	**121**	**1.163**	ug/L	0.028	2	102	16789	2
	Sb	**123**	**1.172**	ug/L	0.022	1	72	12968	2
	Ba	**135**	**439.976**	ug/L	13.241	3	11	1772126	0
	Ba	**137**	**425.149**	ug/L	11.956	2	17	2957229	0
>	**Tb**	**159**		ug/L			1160798	1120422	1
	Tl	**205**	**24.866**	ug/L	0.313	1	51	803083	0
	Pb	**208**	**78.670**	ug/L	1.287	1	139	3351967	0
	Bi	**209**		ug/L			2367270	2134960	1
	Th	**232**	**29.613**	ug/L	0.477	1	21	1203423	0
	U	**238**	**27.278**	ug/L	0.529	1	3	1127476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 APOST SWN

Sb

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, November 15, 2012 14:32:31

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	674945	1
	Be	9	23.537	ug/L	0.839	3	5	49224	3
	C	13		ug/L			58801	74723	2
	Cl	37		ug/L			3025336	3106433	1
>	Sc	45		ug/L			671354	707054	2
	V	51	52.713	ug/L	0.094	0	5156	783934	2
	V-1	51	53.034	ug/L	0.311	0	130	782761	1
	Cr	52	45.462	ug/L	1.251	2	15247	597736	0
	Cr	53	46.495	ug/L	2.034	4	115	67169	2
	Mn	55	874.289	ug/L	23.988	2	250	15425904	1
	Co	59	30.677	ug/L	1.207	3	40	420119	2
>	Ge	72		ug/L			457613	450971	1
	Ni	60	49.136	ug/L	0.364	0	22	134307	2
	Ni	62	50.430	ug/L	0.549	1	29	19399	1
	Cu	63	43.996	ug/L	1.140	2	58	270004	2
	Cu	65	44.543	ug/L	0.887	1	28	123535	2
	Zn	66	200.025	ug/L	8.135	4	143	326783	2
	Zn	67	220.831	ug/L	1.481	0	23	58825	2
	Zn	68	213.785	ug/L	4.968	2	137	251309	1
	As	75	34.560	ug/L	0.509	1	267	52891	0
	As-1	75	34.457	ug/L	0.588	1	8149	60453	0
	Se	82	69.700	ug/L	1.283	1	-5	11552	1
	Se	78	69.970	ug/L	1.647	2	8278	37551	1
	Mo	98	20.897	ug/L	0.741	3	17	91470	2
	Y	89		ug/L			298590	448291	0
	Kr	83		ug/L			554	855	1
>	In	115		ug/L			979916	910154	0
	Ag	107	20.863	ug/L	0.635	3	15	264818	2
	Cd	111	23.674	ug/L	1.007	4	63	104914	3
	Cd	114	23.622	ug/L	0.783	3	30	260227	2
	Sb	121	22.439	ug/L	0.751	3	102	315653	3
	Sb	123	22.038	ug/L	0.456	2	72	237584	1
	Ba	135	468.132	ug/L	5.727	1	11	1847256	0
	Ba	137	448.936	ug/L	2.569	0	17	3059485	1
>	Tb	159		ug/L			1160798	1130035	0
	Tl	205	22.921	ug/L	0.648	2	51	746656	2
	Pb	208	72.890	ug/L	0.790	1	139	3132803	0
	Bi	209		ug/L			2367270	2149611	0
	Th	232	27.504	ug/L	0.622	2	21	1127427	1
	U	238	24.154	ug/L	0.755	3	3	1007011	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 HJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	698329	2
	Be	**9**	**0.623**	ug/L	0.034	5	5	1353	4
	C	**13**		ug/L			58801	78455	1
	Cl	**37**		ug/L			3025336	3160350	1
>	**Sc**	**45**		ug/L			671354	716170	1
	V	**51**	**34.020**	ug/L	0.919	2	5156	514298	1
	V-1	**51**	**34.234**	ug/L	0.763	2	130	511776	1
	Cr	**52**	**31.894**	ug/L	0.597	1	15247	429684	0
	Cr	**53**	**32.587**	ug/L	0.233	0	115	47748	1
	Mn	**55**	**1063.232**	ug/L	28.748	2	250	19002631	1
	Co	**59**	**8.605**	ug/L	0.162	1	40	119440	0
>	**Ge**	**72**		ug/L			457613	456126	1
	Ni	**60**	**20.904**	ug/L	0.185	0	22	57806	1
	Ni	**62**	**22.903**	ug/L	0.461	2	29	8927	1
	Cu	**63**	**17.626**	ug/L	0.087	0	58	109446	0
	Cu	**65**	**18.048**	ug/L	0.413	2	28	50633	1
	Zn	**66**	**256.240**	ug/L	7.636	2	143	423455	2
	Zn	**67**	**257.678**	ug/L	4.340	1	23	69408	0
	Zn	**68**	**258.967**	ug/L	4.660	1	137	307906	1
	As	**75**	**12.264**	ug/L	0.089	0	267	19156	0
	As-1	**75**	**12.348**	ug/L	0.179	1	8149	27123	0
	Se	**82**	**-0.148**	ug/L	0.019	12	-5	-30	9
	Se	**78**	**0.494**	ug/L	0.341	68	8278	8460	0
	Mo	**98**	**0.503**	ug/L	0.005	0	17	2246	1
	Y	**89**		ug/L			298590	376488	1
	Kr	**83**		ug/L			554	755	0
>	**In**	**115**		ug/L			979916	944639	0
	Ag	**107**	**0.140**	ug/L	0.006	4	15	1857	3
	Cd	**111**	**2.156**	ug/L	0.013	0	63	9974	1
	Cd	**114**	**2.032**	ug/L	0.024	1	30	23264	1
	Sb	**121**	**0.143**	ug/L	0.007	4	102	2184	5
	Sb	**123**	**0.134**	ug/L	0.008	5	72	1563	5
	Ba	**135**	**347.645**	ug/L	4.971	1	11	1423873	1
	Ba	**137**	**341.216**	ug/L	0.681	0	17	2413434	0
>	**Tb**	**159**		ug/L			1160798	1130115	0
	Tl	**205**	**0.171**	ug/L	0.002	0	51	5624	0
	Pb	**208**	**87.202**	ug/L	0.093	0	139	3748211	0
	Bi	**209**		ug/L			2367270	2210582	0
	Th	**232**	**6.039**	ug/L	0.062	1	21	247579	1
	U	**238**	**0.757**	ug/L	0.007	0	3	31556	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:41:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~MA~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679526	1
	Be	9	0.422	ug/L	0.028	6	5	893	5
	C	13		ug/L			58801	77609	2
	Cl	37		ug/L			3025336	3126148	0
>	Sc	45		ug/L			671354	689327	0
	V	51	28.455	ug/L	0.535	1	5156	414965	1
	V-1	51	28.609	ug/L	0.550	1	130	411726	1
	Cr	52	24.742	ug/L	0.264	1	15247	324384	0
	Cr	53	25.238	ug/L	0.346	1	115	35619	0
	Mn	55	633.499	ug/L	8.576	1	250	10900767	1
	Co	59	6.300	ug/L	0.127	2	40	84185	1
>	Ge	72		ug/L			457613	465963	1
	Ni	60	14.726	ug/L	0.521	3	22	41590	2
	Ni	62	15.883	ug/L	0.581	3	29	6333	3
	Cu	63	12.043	ug/L	0.364	3	58	76398	2
	Cu	65	12.506	ug/L	0.183	1	28	35852	0
	Zn	66	138.331	ug/L	1.351	0	143	233626	0
	Zn	67	142.198	ug/L	1.014	0	23	39141	0
	Zn	68	140.902	ug/L	2.519	1	137	171195	0
	As	75	10.361	ug/L	0.129	1	267	16574	0
	As-1	75	10.391	ug/L	0.173	1	8149	24632	0
	Se	82	< 0.035	ug/L	0.002	6	-5	0	68
	Se	78	0.237	ug/L	0.168	70	8278	8531	0
	Mo	98	0.435	ug/L	0.016	3	17	1983	2
	Y	89		ug/L			298590	352227	1
	Kr	83		ug/L			554	632	2
>	In	115		ug/L			979916	955334	1
	Ag	107	< 0.076	ug/L	0.003	3	15	1020	3
	Cd	111	1.710	ug/L	0.010	0	63	8014	0
	Cd	114	1.671	ug/L	0.015	0	30	19349	0
	Sb	121	< 0.081	ug/L	0.002	2	102	1289	3
	Sb	123	0.078	ug/L	0.005	6	72	953	4
	Ba	135	213.483	ug/L	2.849	1	11	884189	0
	Ba	137	214.617	ug/L	4.197	1	17	1534917	0
>	Tb	159		ug/L			1160798	1115462	1
	Tl	205	< 0.130	ug/L	0.001	0	51	4231	1
	Pb	208	47.375	ug/L	0.749	1	139	2009688	0
	Bi	209		ug/L			2367270	2207211	0
	Th	232	5.264	ug/L	0.097	1	21	212969	0
	U	238	0.558	ug/L	0.007	1	3	22949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~M Ma Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	675572	1
	Be	**9**	**0.550**	ug/L	0.013	2	5	1156	1
	C	**13**		ug/L			58801	77971	2
	Cl	**37**		ug/L			3025336	3147081	1
>	**Sc**	**45**		ug/L			671354	703172	1
	V	**51**	**32.062**	ug/L	0.406	1	5156	476269	1
	V-1	**51**	**32.326**	ug/L	0.546	1	130	474503	1
	Cr	**52**	**27.375**	ug/L	0.142	0	15247	364415	1
	Cr	**53**	**28.226**	ug/L	0.734	2	115	40614	0
	Mn	**55**	**594.130**	ug/L	7.263	1	250	10428099	1
	Co	**59**	**8.850**	ug/L	0.146	1	40	120617	1
>	**Ge**	**72**		ug/L			457613	455730	0
	Ni	**60**	**19.151**	ug/L	0.263	1	22	52909	0
	Ni	**62**	**20.529**	ug/L	0.421	2	29	7998	1
	Cu	**63**	**16.035**	ug/L	0.314	1	58	99490	1
	Cu	**65**	**16.391**	ug/L	0.437	2	28	45954	2
	Zn	**66**	**144.591**	ug/L	2.035	1	143	238843	1
	Zn	**67**	**159.247**	ug/L	2.659	1	23	42871	1
	Zn	**68**	**152.140**	ug/L	1.222	0	137	180806	0
	As	**75**	**9.950**	ug/L	0.191	1	267	15579	1
	As-1	**75**	**10.097**	ug/L	0.203	2	8149	23640	0
	Se	**82**	**-0.183**	ug/L	0.030	16	-5	-35	13
	Se	**78**	**0.703**	ug/L	0.159	22	8278	8543	0
	Mo	**98**	**0.419**	ug/L	0.009	2	17	1869	1
	Y	**89**		ug/L			298590	365735	0
	Kr	**83**		ug/L			554	759	3
>	**In**	**115**		ug/L			979916	933523	0
	Ag	**107**	**0.142**	ug/L	0.007	5	15	1863	4
	Cd	**111**	**0.776**	ug/L	0.023	2	63	3586	2
	Cd	**114**	**0.702**	ug/L	0.005	0	30	7967	1
	Sb	**121**	**0.045**	ug/L	0.005	10	102	749	8
	Sb	**123**	**0.044**	ug/L	0.005	11	72	550	10
	Ba	**135**	**351.617**	ug/L	2.178	0	11	1423244	1
	Ba	**137**	**344.317**	ug/L	2.932	0	17	2406621	0
>	**Tb**	**159**		ug/L			1160798	1120669	0
	Tl	**205**	**0.134**	ug/L	0.001	0	51	4373	0
	Pb	**208**	**29.457**	ug/L	0.101	0	139	1255687	0
	Bi	**209**		ug/L			2367270	2172168	0
	Th	**232**	**6.167**	ug/L	0.020	0	21	250714	0
	U	**238**	**0.796**	ug/L	0.001	0	3	32916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	653054	1
	Be	9	50.935	ug/L	0.279	0	5	103070	1
	C	13		ug/L			58801	55254	0
	Cl	37		ug/L			3025336	3246034	3
>	Sc	45		ug/L			671354	626960	0
	V	51	49.795	ug/L	0.110	0	5156	656929	0
	V-1	51	49.884	ug/L	0.231	0	130	652932	0
	Cr	52	50.578	ug/L	0.307	0	15247	588304	0
	Cr	53	50.871	ug/L	0.814	1	115	65200	1
	Mn	55	50.110	ug/L	0.318	0	250	784487	0
	Co	59	50.996	ug/L	1.214	2	40	619523	1
>	Ge	72		ug/L			457613	443132	1
	Ni	60	49.433	ug/L	1.488	3	22	132720	1
	Ni	62	50.141	ug/L	1.281	2	29	18948	1
	Cu	63	50.664	ug/L	1.762	3	58	305416	1
	Cu	65	50.750	ug/L	0.599	1	28	138271	0
	Zn	66	50.872	ug/L	1.308	2	143	81777	0
	Zn	67	52.294	ug/L	0.855	1	23	13702	1
	Zn	68	50.542	ug/L	1.778	3	137	58471	1
	As	75	49.700	ug/L	0.885	1	267	74621	0
	As-1	75	50.125	ug/L	1.089	2	8149	82817	0
	Se	82	50.158	ug/L	0.754	1	-5	8166	0
	Se	78	51.653	ug/L	1.517	2	8278	29332	0
	Mo	98	47.489	ug/L	0.999	2	17	204259	1
	Y	89		ug/L			298590	290226	1
	Kr	83		ug/L			554	535	3
>	In	115		ug/L			979916	917463	0
	Ag	107	47.357	ug/L	1.257	2	15	605947	2
	Cd	111	50.402	ug/L	0.091	0	63	225139	0
	Cd	114	50.757	ug/L	0.721	1	30	563681	0
	Sb	121	50.960	ug/L	0.237	0	102	722571	0
	Sb	123	50.197	ug/L	0.690	1	72	545445	0
	Ba	135	50.266	ug/L	1.072	2	11	199954	1
	Ba	137	50.190	ug/L	0.680	1	17	344786	1
>	Tb	159		ug/L			1160798	1065657	0
	Tl	205	52.641	ug/L	0.397	0	51	1617129	0
	Pb	208	51.463	ug/L	0.183	0	139	2085946	0
	Bi	209		ug/L			2367270	2151419	0
	Th	232	52.614	ug/L	0.287	0	21	2033951	0
	U	238	53.008	ug/L	0.660	1	3	2084247	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	638148	0
	Be	9	0.001	ug/L	0.002	155	5	7	54
	C	13		ug/L			58801	54689	3
	Cl	37		ug/L			3025336	3047486	1
>	Sc	45		ug/L			671354	617720	0
	V	51	0.020	ug/L	0.003	14	5156	5007	1
	V-1	51	-0.002	ug/L	0.002	99	130	97	23
	Cr	52	0.062	ug/L	0.002	3	15247	14722	0
	Cr	53	-0.010	ug/L	0.004	35	115	93	4
	Mn	55	0.014	ug/L	0.002	18	250	441	9
	Co	59	0.001	ug/L	0.001	57	40	49	15
>	Ge	72		ug/L			457613	446360	1
	Ni	60	-0.001	ug/L	0.003	234	22	19	39
	Ni	62	0.143	ug/L	0.036	24	29	83	15
	Cu	63	0.009	ug/L	0.001	6	58	113	2
	Cu	65	0.002	ug/L	0.002	130	28	33	18
	Zn	66	-0.007	ug/L	0.007	107	143	128	9
	Zn	67	-0.003	ug/L	0.018	641	23	22	20
	Zn	68	-0.006	ug/L	0.004	63	137	126	2
	As	75	-0.006	ug/L	0.009	141	267	251	5
	As-1	75	0.282	ug/L	0.051	18	8149	8373	0
	Se	82	-0.028	ug/L	0.024	84	-5	-9	39
	Se	78	1.033	ug/L	0.209	20	8278	8504	0
	Mo	98	0.011	ug/L	0.002	21	17	64	15
	Y	89		ug/L			298590	281163	1
	Kr	83		ug/L			554	550	5
>	In	115		ug/L			979916	926226	0
	Ag	107	0.003	ug/L	0.001	48	15	47	33
	Cd	111	0.005	ug/L	0.001	17	63	82	5
	Cd	114	0.001	ug/L	0.001	81	30	45	30
	Sb	121	0.057	ug/L	0.004	7	102	913	6
	Sb	123	0.062	ug/L	0.004	6	72	745	5
	Ba	135	0.004	ug/L	0.002	44	11	28	26
	Ba	137	0.006	ug/L	0.003	48	17	54	34
>	Tb	159		ug/L			1160798	1035087	0
	Tl	205	0.007	ug/L	0.002	37	51	242	29
	Pb	208	0.002	ug/L	0.000	16	139	207	6
	Bi	209		ug/L			2367270	2178604	0
	Th	232	0.082	ug/L	0.011	12	21	3089	13
	U	238	0.001	ug/L	0.000	13	3	58	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:15:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669406	0
	Be	9	0.407	ug/L	0.012	2	5	848	2
	C	13		ug/L			58801	80581	2
	Cl	37		ug/L			3025336	3193936	2
>	Sc	45		ug/L			671354	683285	0
	V	51	35.887	ug/L	0.251	0	5156	517430	0
	V-1	51	36.082	ug/L	0.246	0	130	514727	0
	Cr	52	21.298	ug/L	0.311	1	15247	278958	0
	Cr	53	21.901	ug/L	0.451	2	115	30657	2
	Mn	55	329.072	ug/L	3.730	1	250	5613192	1
	Co	59	7.080	ug/L	0.204	2	40	93768	2
>	Ge	72		ug/L			457613	455954	0
	Ni	60	15.809	ug/L	0.272	1	22	43704	2
	Ni	62	17.308	ug/L	0.370	2	29	6751	2
	Cu	63	20.220	ug/L	0.031	0	58	125500	0
	Cu	65	20.890	ug/L	0.754	3	28	58592	3
	Zn	66	108.758	ug/L	1.460	1	143	179787	1
	Zn	67	108.959	ug/L	0.867	0	23	29354	0
	Zn	68	108.184	ug/L	1.985	1	137	128679	2
	As	75	7.705	ug/L	0.089	1	267	12132	1
	As-1	75	7.849	ug/L	0.055	0	8149	20194	0
	Se	82	0.414	ug/L	0.043	10	-5	64	10
	Se	78	1.044	ug/L	0.214	20	8278	8691	0
	Mo	98	0.459	ug/L	0.011	2	17	2048	1
	Y	89		ug/L			298590	400196	1
	Kr	83		ug/L			554	625	2
>	In	115		ug/L			979916	930629	0
	Ag	107	0.157	ug/L	0.002	1	15	2056	1
	Cd	111	1.489	ug/L	0.020	1	63	6806	1
	Cd	114	1.440	ug/L	0.020	1	30	16254	1
	Sb	121	0.113	ug/L	0.005	4	102	1716	4
	Sb	123	0.114	ug/L	0 009	7	72	1327	7
	Ba	135	82.352	ug/L	0.496	0	11	332298	0
	Ba	137	81.904	ug/L	0.850	1	17	570729	1
>	Tb	159		ug/L			1160798	1100079	1
	Tl	205	0.137	ug/L	0.004	3	51	4382	2
	Pb	208	72.029	ug/L	0.789	1	139	3013558	1
	Bi	209		ug/L			2367270	2170815	0
	Th	232	4.886	ug/L	0.098	1	21	194989	1
	U	238	2.901	ug/L	0.038	1	3	117734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:19:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	669174	2
	Be	9	0.680	ug/L	0.002	0	5	1415	2
	C	13		ug/L			58801	70255	3
	Cl	37		ug/L			3025336	3104801	1
>	Sc	45		ug/L			671354	700996	0
	V	51	37.182	ug/L	1.136	3	5156	549741	2
	V-1	51	37.576	ug/L	1.008	2	130	549876	1
	Cr	52	29.206	ug/L	0.908	3	15247	386501	2
	Cr	53	30.477	ug/L	0.725	2	115	43717	1
	Mn	55	523.625	ug/L	1 065	0	250	9162946	0
	Co	59	8.756	ug/L	0.220	2	40	118974	2
>	Ge	72		ug/L			457613	451392	1
	Ni	60	24.045	ug/L	0.747	3	22	65780	2
	Ni	62	25.669	ug/L	0.712	2	29	9896	1
	Cu	63	22.795	ug/L	0.366	1	58	140050	1
	Cu	65	23.468	ug/L	0.311	1	28	65150	0
	Zn	66	122.207	ug/L	4.215	3	143	199922	2
	Zn	67	136.089	ug/L	4.558	3	23	36282	2
	Zn	68	130.021	ug/L	3.751	2	137	153037	1
	As	75	9.811	ug/L	0.105	1	267	15218	0
	As-1	75	9.965	ug/L	0.182	1	8149	23214	0
	Se	82	-0.163	ug/L	0.058	35	-5	-32	28
	Se	78	0.820	ug/L	0.289	35	8278	8510	0
	Mo	98	0.375	ug/L	0.017	4	17	1660	4
	Y	89		ug/L			298590	371868	1
	Kr	83		ug/L			554	789	1
>	In	115		ug/L			979916	924672	0
	Ag	107	0.132	ug/L	0.001	1	15	1718	1
	Cd	111	0.775	ug/L	0.020	2	63	3546	2
	Cd	114	0.684	ug/L	0.020	2	30	7680	2
	Sb	121	0.036	ug/L	0.002	5	102	608	3
	Sb	123	0.032	ug/L	0.005	14	72	418	11
	Ba	135	298.166	ug/L	6.317	2	11	1195360	1
	Ba	137	292.927	ug/L	3.240	1	17	2028058	0
>	Tb	159		ug/L			1160798	1096148	1
	Tl	205	0.142	ug/L	0.002	1	51	4546	2
	Pb	208	31.727	ug/L	0.426	1	139	1322698	0
	Bi	209		ug/L			2367270	2152836	0
	Th	232	8.735	ug/L	0.049	0	21	347366	1
	U	238	0.914	ug/L	0.009	0	3	36970	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:24:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	657743	1
	Be	9	0.507	ug/L	0.033	6	5	1037	4
	C	13		ug/L			58801	76553	3
	Cl	37		ug/L			3025336	3137143	1
>	Sc	45		ug/L			671354	685808	1
	V	51	17.329	ug/L	0.328	1	5156	253482	1
	V-1	51	17.346	ug/L	0.317	1	130	248413	1
	Cr	52	15.116	ug/L	0.170	1	15247	203231	1
	Cr	53	15.167	ug/L	0.140	0	115	21344	1
	Mn	55	667.237	ug/L	18.091	2	250	11420270	1
	Co	59	5.260	ug/L	0.164	3	40	69955	4
>	Ge	72		ug/L			457613	456304	2
	Ni	60	14.100	ug/L	0.124	0	22	39006	2
	Ni	62	15.289	ug/L	0.571	3	29	5968	1
	Cu	63	11.816	ug/L	0.138	1	58	73403	1
	Cu	65	12.204	ug/L	0.355	2	28	34249	1
	Zn	66	128.498	ug/L	4.057	3	143	212455	1
	Zn	67	139.135	ug/L	4.668	3	23	37485	0
	Zn	68	137.508	ug/L	6.747	4	137	163512	2
	As	75	8.079	ug/L	0.230	2	267	12711	1
	As-1	75	8.199	ug/L	0.400	4	8149	20738	0
	Se	82	-0.106	ug/L	0.080	75	-5	-23	60
	Se	78	0.566	ug/L	0.704	124	8278	8490	0
	Mo	98	0.340	ug/L	0.016	4	17	1523	2
	Y	89		ug/L			298590	383551	3
	Kr	83		ug/L			554	696	3
>	In	115		ug/L			979916	945372	0
	Ag	107	0.087	ug/L	0.003	3	15	1160	3
	Cd	111	1.873	ug/L	0.025	1	63	8677	1
	Cd	114	1.797	ug/L	0.047	2	30	20592	2
	Sb	121	0.073	ug/L	0.002	2	102	1162	2
	Sb	123	0.074	ug/L	0.004	4	72	903	4
	Ba	135	288.873	ug/L	1.308	0	11	1184091	0
	Ba	137	280.728	ug/L	1.889	0	17	1987154	0
>	Tb	159		ug/L			1160798	1119393	0
	Tl	205	-0.146	ug/L	0.003	2	51	4753	2
	Pb	208	106.225	ug/L	0.593	0	139	4522433	0
	Bi	209		ug/L			2367270	2183517	0
	Th	232	4.535	ug/L	0.012	0	21	184151	0
	U	238	0.575	ug/L	0.013	2	3	23754	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:28:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn Pb Zn
11.16.12
mJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			726304	660277	1
	Be	9	0.123	ug/L	0.008	6	5	257	5
	C	13		ug/L			58801	63435	0
	Cl	37		ug/L			3025336	3067991	4
>	Sc	45		ug/L			671354	662027	1
	V	51	5.902	ug/L	0.083	1	5156	86689	1
	V-1	51	6.017	ug/L	0.092	1	130	83258	0
	Cr	52	10.575	ug/L	0.191	1	15247	141756	0
	Cr	53	10.963	ug/L	0.304	2	115	14921	1
	Mn	55	139.939	ug/L	1.097	0	250	2312815	1
	Co	59	2.113	ug/L	0.057	2	40	27145	1
>	Ge	72		ug/L			457613	449855	1
	Ni	60	5.476	ug/L	0.094	1	22	14948	0
	Ni	62	5.912	ug/L	0.180	3	29	2294	4
	Cu	63	6.348	ug/L	0.157	2	58	38914	2
	Cu	65	6.577	ug/L	0.087	1	28	18218	1
	Zn	66	114.834	ug/L	4.549	3	143	187227	2
	Zn	67	108.058	ug/L	1.654	1	23	28723	1
	Zn	68	111.601	ug/L	3.758	3	137	130930	2
	As	75	4.779	ug/L	0.054	1	267	7523	1
	As-1	75	5.014	ug/L	0.169	3	8149	15620	0
	Se	82	0.078	ug/L	0.022	27	-5	7	47
	Se	78	0.941	ug/L	0.446	47	8278	8531	1
	Mo	98	0.083	ug/L	0.006	7	17	377	7
	Y	89		ug/L			298590	324782	0
	Kr	83		ug/L			554	560	2
>	In	115		ug/L			979916	934916	1
	Ag	107	0.057	ug/L	0.002	3	15	760	3
	Cd	111	2.931	ug/L	0.051	1	63	13398	1
	Cd	114	2.948	ug/L	0.061	2	30	33380	0
	Sb	121	0.053	ug/L	0.000	0	102	856	1
	Sb	123	0.054	ug/L	0.004	8	72	665	8
	Ba	135	43.224	ug/L	0.522	1	11	175226	1
	Ba	137	42.392	ug/L	0.102	0	17	296765	0
>	Tb	159		ug/L			1160798	1072424	0
	Tl	205	0.111	ug/L	0.001	0	51	3477	1
	Pb	208	84.415	ug/L	0.475	0	139	3443084	0
	Bi	209		ug/L			2367270	2206189	0
	Th	232	1.240	ug/L	0.010	0	21	48239	0
	U	238	0.166	ug/L	0.003	1	3	6578	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:32:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			726304	665866	0
	Be	**9**	**0.564**	ug/L	0.003	0	5	1168	0
	C	**13**		ug/L			58801	86475	4
	Cl	**37**		ug/L			3025336	3153528	0
>	**Sc**	**45**		ug/L			671354	705952	0
	V	**51**	**28.815**	ug/L	0.566	1	5156	430315	1
	V-1	**51**	**29.088**	ug/L	0.289	0	130	428742	0
	Cr	**52**	**50.609**	ug/L	1.449	2	15247	662765	2
	Cr	**53**	**51.554**	ug/L	1.592	3	115	74389	2
	Mn	**55**	**644.019**	ug/L	8.250	1	250	11348910	0
	Co	**59**	**9.783**	ug/L	0.085	0	40	133878	1
>	**Ge**	**72**		ug/L			457613	449480	0
	Ni	**60**	**27.394**	ug/L	0 094	0	22	74637	0
	Ni	**62**	**29.370**	ug/L	1.047	3	29	11273	3
	Cu	**63**	**31.639**	ug/L	0.429	1	58	193560	1
	Cu	**65**	**32.121**	ug/L	0.736	2	28	88797	2
	Zn	**66**	**550.649**	ug/L	8.791	1	143	896736	1
	Zn	**67**	**524.104**	ug/L	4.641	0	23	139110	1
	Zn	**68**	**544.587**	ug/L	8.982	1	137	637972	1
	As	**75**	**23.702**	ug/L	0.270	1	267	36241	1
	As-1	**75**	**23.922**	ug/L	0.302	1	8149	44284	1
	Se	**82**	**0.176**	ug/L	0.105	59	-5	23	72
	Se	**78**	**1.244**	ug/L	0.173	13	8278	8652	0
	Mo	**98**	**0.425**	ug/L	0.017	3	17	1870	3
	Y	**89**		ug/L			298590	439800	0
	Kr	**83**		ug/L			554	728	3
>	**In**	**115**		ug/L			979916	978306	1
	Ag	**107**	**0.250**	ug/L	0.010	4	15	3429	3
	Cd	**111**	**13.687**	ug/L	0.071	0	63	65234	0
	Cd	**114**	**13.694**	ug/L	0.178	1	30	162189	0
	Sb	**121**	**0.245**	ug/L	0.010	3	102	3806	2
	Sb	**123**	**0.238**	ug/L	0.005	1	72	2832	1
	Ba	**135**	**208.286**	ug/L	5.230	2	11	883366	1
	Ba	**137**	**207.928**	ug/L	3.046	1	17	1522968	0
>	**Tb**	**159**		ug/L			1160798	1122794	0
	Tl	**205**	**0.522**	ug/L	0.008	1	51	16955	1
	Pb	**208**	**390.055**	ug/L	2.097	0	139	16656267	0
	Bi	**209**		ug/L			2367270	2197146	0
	Th	**232**	**5.886**	ug/L	0.058	0	21	239765	0
	U	**238**	**0.802**	ug/L	0.005	0	3	33236	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:36:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn 11.16.12 KW

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	682210	1
	Be	9	0.946	ug/L	0.036	3	5	2003	2
	C	13		ug/L			58801	88206	3
	Cl	37		ug/L			3025336	3220928	1
>	Sc	45		ug/L			671354	714096	1
	V	51	28.808	ug/L	0.700	2	5156	435110	1
	V-1	51	28.997	ug/L	0.762	2	130	432258	1
	Cr	52	28.944	ug/L	0.532	1	15247	390315	0
	Cr	53	29.561	ug/L	0.615	2	115	43193	0
	Mn	55	1267.402	ug/L	30.160	2	250	22588239	1
	Co	59	17.782	ug/L	0.060	0	40	246102	1
>	Ge	72		ug/L			457613	455857	0
	Ni	60	41.561	ug/L	0.607	1	22	114833	1
	Ni	62	43.462	ug/L	0.815	1	29	16904	1
	Cu	63	34.594	ug/L	0.774	2	58	214645	2
	Cu	65	35.502	ug/L	0.285	0	28	99528	1
	Zn	66	189.077	ug/L	0.787	0	143	312378	0
	Zn	67	196.555	ug/L	3.707	1	23	52923	1
	Zn	68	199.365	ug/L	5.140	2	137	236945	2
	As	75	17.851	ug/L	0.052	0	267	27747	0
	As-1	75	17.977	ug/L	0.026	0	8149	35768	0
	Se	82	-0.016	ug/L	0.026	157	-5	-8	53
	Se	78	0.951	ug/L	0.108	11	8278	8651	0
	Mo	98	1.116	ug/L	0.014	1	17	4956	0
	Y	89		ug/L			298590	491114	1
	Kr	83		ug/L			554	858	2
>	In	115		ug/L			979916	934135	2
	Ag	107	0.186	ug/L	0.007	3	15	2440	3
	Cd	111	3.351	ug/L	0.084	2	63	15288	0
	Cd	114	3.182	ug/L	0.054	1	30	36003	0
	Sb	121	0.130	ug/L	0.005	3	102	1977	1
	Sb	123	0.135	ug/L	0.004	3	72	1556	1
	Ba	135	248.316	ug/L	8.423	3	11	1005223	1
	Ba	137	249.377	ug/L	4.231	1	17	1743825	1
>	Tb	159		ug/L			1160798	1122418	2
	Tl	205	0.236	ug/L	0.010	4	51	7668	1
	Pb	208	106.027	ug/L	3.003	2	139	4524052	0
	Bi	209		ug/L			2367270	2143333	1
	Th	232	7.142	ug/L	0.123	1	21	290753	1
	U	238	1.081	ug/L	0.033	3	3	44751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:42:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn
11.16.12 WSJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	654111	1
	Be	**9**	**0.564**	ug/L	0.019	3	5	1148	1
	C	**13**		ug/L			58801	77009	2
	Cl	**37**		ug/L			3025336	3032412	1
>	**Sc**	**45**		ug/L			671354	695448	1
	V	**51**	**30.830**	ug/L	1.145	3	5156	453066	2
	V-1	**51**	**30.859**	ug/L	1.219	3	130	447937	2
	Cr	**52**	**17.705**	ug/L	0 178	1	15247	238676	0
	Cr	**53**	**17.765**	ug/L	0.332	1	115	25330	0
	Mn	**55**	**863.901**	ug/L	23.840	2	250	14994078	1
	Co	**59**	**7.032**	ug/L	0.257	3	40	94793	3
>	**Ge**	**72**		ug/L			457613	456027	0
	Ni	**60**	**13.888**	ug/L	0.152	1	22	38399	0
	Ni	**62**	**15.079**	ug/L	0 504	3	29	5886	3
	Cu	**63**	**12.199**	ug/L	0.323	2	58	75746	2
	Cu	**65**	**12.739**	ug/L	0.236	1	28	35747	2
	Zn	**66**	**184.237**	ug/L	6.900	3	143	304457	3
	Zn	**67**	**186.502**	ug/L	3.339	1	23	50238	2
	Zn	**68**	**186.679**	ug/L	2.744	1	137	221961	1
	As	**75**	**14.218**	ug/L	0.042	0	267	22163	0
	As-1	**75**	**14.461**	ug/L	0.082	0	8149	30370	0
	Se	**82**	**-0.107**	ug/L	0.067	62	-5	-23	47
	Se	**78**	**1.034**	ug/L	0.150	14	8278	8689	0
	Mo	**98**	**0.389**	ug/L	0.010	2	17	1737	3
	Y	**89**		ug/L			298590	366460	1
	Kr	**83**		ug/L			554	719	3
>	**In**	**115**		ug/L			979916	940423	1
	Ag	**107**	**0.094**	ug/L	0.003	3	15	1251	2
	Cd	**111**	**2.428**	ug/L	0.092	3	63	11170	2
	Cd	**114**	**2.391**	ug/L	0.070	2	30	27236	1
	Sb	**121**	**0.185**	ug/L	0.007	3	102	2791	2
	Sb	**123**	**0.187**	ug/L	0.008	4	72	2149	2
	Ba	**135**	**247.443**	ug/L	8 280	3	11	1008614	1
	Ba	**137**	**245.503**	ug/L	7.146	2	17	1728208	1
>	**Tb**	**159**		ug/L			1160798	1100374	1
	Tl	**205**	**0.217**	ug/L	0.006	2	51	6922	1
	Pb	**208**	**125.130**	ug/L	3.348	2	139	5235412	1
	Bi	**209**		ug/L			2367270	2156542	0
	Th	**232**	**5.759**	ug/L	0.225	3	21	229816	2
	U	**238**	**0.550**	ug/L	0.010	1	3	22321	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:46:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	667813	2
	Be	9	1.028	ug/L	0.009	0	5	2132	3
	C	13		ug/L			58801	70718	1
	Cl	37		ug/L			3025336	3124918	1
>	Sc	45		ug/L			671354	728616	1
	V	51	35.473	ug/L	0.502	1	5156	545479	2
	V-1	51	35.701	ug/L	0.656	1	130	543057	1
	Cr	52	38.421	ug/L	0.236	0	15247	523315	1
	Cr	53	39.173	ug/L	1.085	2	115	58360	1
	Mn	55	794.786	ug/L	15.153	1	250	14453630	0
	Co	59	9.691	ug/L	0.212	2	40	136840	0
>	Ge	72		ug/L			457613	452968	1
	Ni	60	31.588	ug/L	0.721	2	22	86714	1
	Ni	62	34.544	ug/L	1.143	3	29	13355	2
	Cu	63	35.520	ug/L	0.870	2	58	218945	1
	Cu	65	36.683	ug/L	0.638	1	28	102180	1
	Zn	66	172.125	ug/L	6.565	3	143	282507	2
	Zn	67	185.298	ug/L	2.461	1	23	49575	0
	Zn	68	179.224	ug/L	3.091	1	137	211659	0
	As	75	10.408	ug/L	0.217	2	267	16184	1
	As-1	75	10.593	ug/L	0.260	2	8149	24253	0
	Se	82	-0.098	ug/L	0.020	20	-5	-21	15
	Se	78	1.243	ug/L	0 188	15	8278	8718	0
	Mo	98	0.543	ug/L	0.006	1	17	2404	1
	Y	89		ug/L			298590	554725	1
	Kr	83		ug/L			554	925	3
>	In	115		ug/L			979916	924382	1
	Ag	107	0.476	ug/L	0.009	1	15	6152	1
	Cd	111	1.064	ug/L	0.038	3	63	4846	3
	Cd	114	0.851	ug/L	0.021	2	30	9554	1
	Sb	121	0.042	ug/L	0.001	2	102	692	2
	Sb	123	0.042	ug/L	0.002	4	72	522	3
	Ba	135	298.621	ug/L	4.371	1	11	1196747	0
	Ba	137	290.337	ug/L	2.599	0	17	2009421	0
>	Tb	159		ug/L			1160798	1126736	0
	Tl	205	0.186	ug/L	0.006	3	51	6082	2
	Pb	208	26.887	ug/L	0.265	0	139	1152291	0
	Bi	209		ug/L			2367270	2133097	0
	Th	232	8.379	ug/L	0.115	1	21	342472	0
	U	238	2.031	ug/L	0.025	1	3	84421	0

VR30 · 88238

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 400
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:50:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn Ba~~ Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	636136	1
	Be	**9**	**0.041**	ug/L	0.003	7	5	85	7
	C	**13**		ug/L			58801	61326	2
	Cl	**37**		ug/L			3025336	3058642	2
>	**Sc**	**45**		ug/L			671354	632888	0
	V	**51**	**1.298**	ug/L	0.033	2	5156	22017	1
	V-1	**51**	**1.304**	ug/L	0.035	2	130	17341	2
	Cr	**52**	**1.003**	ug/L	0.030	3	15247	25864	1
	Cr	**53**	**1.021**	ug/L	0 022	2	115	1427	2
	Mn	**55**	**124.604**	ug/L	3.450	2	250	1968617	2
	Co	**59**	**0.386**	ug/L	0.001	0	40	4772	0
>	**Ge**	**72**		ug/L			457613	444686	1
	Ni	**60**	**0.797**	ug/L	0.019	2	22	2168	1
	Ni	**62**	**0.903**	ug/L	0.069	7	29	371	8
	Cu	**63**	**1.174**	ug/L	0.030	2	58	7157	1
	Cu	**65**	**1.198**	ug/L	0.039	3	28	3302	3
	Zn	**66**	**25.175**	ug/L	0.267	1	143	40689	0
	Zn	**67**	**25.964**	ug/L	0.638	2	23	6838	1
	Zn	**68**	**25.970**	ug/L	0.246	0	137	30224	0
	As	**75**	**0.899**	ug/L	0.030	3	267	1609	2
	As-1	**75**	**1.215**	ug/L	0.081	6	8149	9740	0
	Se	**82**	**0.089**	ug/L	0.059	65	-5	9	102
	Se	**78**	**1.165**	ug/L	0.239	20	8278	8526	0
	Mo	**98**	**0.017**	ug/L	0.001	4	17	91	3
	Y	**89**		ug/L			298590	298434	1
	Kr	**83**		ug/L			554	506	1
>	**In**	**115**		ug/L			979916	941485	1
	Ag	**107**	**0.009**	ug/L	0.000	3	15	129	2
	Cd	**111**	**0.288**	ug/L	0.005	1	63	1379	1
	Cd	**114**	**0.289**	ug/L	0.009	3	30	3318	1
	Sb	**121**	**0.011**	ug/L	0.002	16	102	256	9
	Sb	**123**	**0.012**	ug/L	0.002	19	72	207	11
	Ba	**135**	**37.630**	ug/L	0.775	2	11	153598	0
	Ba	**137**	**37.562**	ug/L	0.159	0	17	264796	0
>	**Tb**	**159**		ug/L			1160798	1052930	0
	Tl	**205**	**0.017**	ug/L	0.001	3	51	563	3
	Pb	**208**	**13.938**	ug/L	0.179	1	139	558265	1
	Bi	**209**		ug/L			2367270	2205197	0
	Th	**232**	**0.296**	ug/L	0.003	1	21	11334	1
	U	**238**	**0.028**	ug/L	0.001	2	3	1087	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			726304	653170	1
	Be	9	0.761	ug/L	0.013	1	5	1545	1
	C	13		ug/L			58801	81288	3
	Cl	37		ug/L			3025336	3033576	0
>	Sc	45		ug/L			671354	706731	2
	V	51	23.449	ug/L	1.012	4	5156	351351	2
	V-1	51	23.534	ug/L	0.987	4	130	347072	2
	Cr	52	16.990	ug/L	0.519	3	15247	233317	0
	Cr	53	17.253	ug/L	0.439	2	115	24996	1
	Mn	55	2150.704	ug/L	61.340	2	250	37926409	0
	Co	59	6.627	ug/L	0.107	1	40	90797	2
>	Ge	72		ug/L			457613	456813	1
	Ni	60	14.680	ug/L	0.036	0	22	40660	1
	Ni	62	15.894	ug/L	0.225	1	29	6214	2
	Cu	63	21.081	ug/L	0.744	3	58	131045	1
	Cu	65	22.443	ug/L	0.785	3	28	63083	5
	Zn	66	449.072	ug/L	12.922	2	143	743120	2
	Zn	67	461.213	ug/L	1.219	0	23	124416	1
	Zn	68	464.143	ug/L	13.107	2	137	552468	1
	As	75	16.738	ug/L	0.287	1	267	26085	0
	As-1	75	16.850	ug/L	0.367	2	8149	34099	0
	Se	82	U 0.088	ug/L	0.205	232	-5	9	378
	Se	78	0.728	ug/L	0.390	53	8278	8572	0
	Mo	98	0.375	ug/L	0.020	5	17	1677	3
	Y	89		ug/L			298590	396305	2
	Kr	83		ug/L			554	710	11
>	In	115		ug/L			979916	958845	1
	Ag	107	U 0.160	ug/L	0.009	5	15	2153	4
	Cd	111	5.550	ug/L	0.089	1	63	25960	0
	Cd	114	5.416	ug/L	0.073	1	30	62884	0
	Sb	121	0.261	ug/L	0.009	3	102	3971	1
	Sb	123	0.258	ug/L	0.005	2	72	2998	3
	Ba	135	748.464	ug/L	13.025	1	11	3111128	0
	Ba	137	743.815	ug/L	14.705	1	17	5339048	0
>	Tb	159		ug/L			1160798	1120387	0
	Tl	205	0.303	ug/L	0.003	0	51	9821	1
	Pb	208	257.186	ug/L	2.655	1	139	10958566	0
	Bi	209		ug/L			2367270	2196515	0
	Th	232	5.193	ug/L	0.079	1	21	211053	0
	U	238	0.506	ug/L	0.003	0	3	20936	1

VR31 B SWN

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635238 ✓	1
	Be	9	54.646	ug/L	1.333	2	5	107543	1
	C	13		ug/L			58801	56029	2
	Cl	37		ug/L			3025336	3144406	1
>	Sc	45		ug/L			671354	623256 ✓	1
	V	51	50.192	ug/L	0.175	0	5156	658203	0
	V-1	51	50.479	ug/L	0.474	0	130	656770	0
	Cr	52	50.519	ug/L	0.540	1	15247	584145	1
	Cr	53	51.457	ug/L	0.988	1	115	65550	1
	Mn	55	50.346	ug/L	0.069	0	250	783508	1
	Co	59	51.843	ug/L	1.826	3	40	626010	2
>	Ge	72		ug/L			457613	453894 ✓	1
	Ni	60	48.799	ug/L	0.890	1	22	134224	0
	Ni	62	50.125	ug/L	1.243	2	29	19407	2
	Cu	63	49.427	ug/L	0.655	1	58	305288	0
	Cu	65	49.250	ug/L	0.593	1	28	137449	0
	Zn	66	49.719	ug/L	1.167	2	143	81876	1
	Zn	67	50.015	ug/L	0.460	0	23	13426	1
	Zn	68	49.375	ug/L	0.301	0	137	58532	0
	As	75	48.609	ug/L	0.318	0	267	74773	1
	As-1	75	48.872	ug/L	0.661	1	8149	82922	0
	Se	82	49.155	ug/L	0.122	0	-5	8198	1
	Se	78	50.030	ug/L	1.282	2	8278	29361	0
	Mo	98	46.368	ug/L	0.696	1	17	204295	1
	Y	89		ug/L			298590	287369	0
	Kr	83		ug/L			554	528	2
>	In	115		ug/L			979916	909941 ✓	2
	Ag	107	48.363	ug/L	0.269	0	15	613832	2
	Cd	111	50.995	ug/L	0.236	0	63	225903	1
	Cd	114	51.124	ug/L	0.586	1	30	563049	0
	Sb	121	50.900	ug/L	0.971	1	102	715631	0
	Sb	123	50.958	ug/L	0.807	1	72	549082	0
	Ba	135	50.546	ug/L	0.847	1	11	199395	0
	Ba	137	50.006	ug/L	0.792	1	17	340645	0
>	Tb	159		ug/L			1160798	1051076 ✓	0
	Tl	205	52.483	ug/L	0.137	0	51	1590218	0
	Pb	208	51.498	ug/L	0.261	0	139	2058738	0
	Bi	209		ug/L			2367270	2129498	0
	Th	232	52.911	ug/L	0.476	0	21	2017351	0
	U	238	53.047	ug/L	0.501	0	3	2057180	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:05:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635099 ✓	1
	Be	9	0.002	ug/L	0.001	56	5	9	24
	C	13		ug/L			58801	55687	1
	Cl	37		ug/L			3025336	3023678	0
>	Sc	45		ug/L			671354	615760 ✓	1
	V	51	0.030	ug/L	0.012	40	5156	5115	4
	V-1	51	0.005	ug/L	0.000	3	130	187	1
	Cr	52	0.097	ug/L	0.043	44	15247	15064	4
	Cr	53	0.016	ug/L	0.004	24	115	126	4
	Mn	55	0.037	ug/L	0.045	123	250	797	88
	Co	59	0.002	ug/L	0.002	82	40	65	36
>	Ge	72		ug/L			457613	436174 ✓	0
	Ni	60	0.001	ug/L	0.002	247	22	23	21
	Ni	62	0.075	ug/L	0.022	29	29	56	14
	Cu	63	0.007	ug/L	0.002	21	58	99	9
	Cu	65	0.003	ug/L	0.001	20	28	36	5
	Zn	66	0.003	ug/L	0.007	225	143	141	8
	Zn	67	0.022	ug/L	0.018	80	23	28	15
	Zn	68	0.010	ug/L	0.003	25	137	142	2
	As	75	-0.012	ug/L	0.013	107	267	237	7
	As-1	75	0.412	ug/L	0.066	16	8149	8373	0
	Se	82	0.042	ug/L	0.018	41	-5	1	170
	Se	78	1.543	ug/L	0.228	14	8278	8517	0
	Mo	98	0.007	ug/L	0.003	35	17	46	23
	Y	89		ug/L			298590	280384	1
	Kr	83		ug/L			554	512	1
>	In	115		ug/L			979916	898103 ✓	1
	Ag	107	0.002	ug/L	0.001	44	15	38	27
	Cd	111	0.006	ug/L	0.005	84	63	82	24
	Cd	114	0.002	ug/L	0.001	65	30	49	27
	Sb	121	0.054	ug/L	0.003	5	102	838	3
	Sb	123	0.053	ug/L	0.005	9	72	629	7
	Ba	135	0.013	ug/L	0.016	128	11	60	104
	Ba	137	0.010	ug/L	0.013	124	17	83	100
>	Tb	159		ug/L			1160798	1002039 ✓	0
	Tl	205	0.010	ug/L	0.005	50	51	319	43
	Pb	208	0.006	ug/L	0.006	98	139	364	65
	Bi	209		ug/L			2367270	2132633	0
	Th	232	0.087	ug/L	0.004	4	21	3194	5
	U	238	0.002	ug/L	0.002	81	3	81	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:12:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	626341	2
	Be	9	0.002	ug/L	0.002	144	5	8	54
	C	13		ug/L			58801	58031	1
	Cl	37		ug/L			3025336	3022541	1
>	Sc	45		ug/L			671354	623819	4
	V	51	0.023	ug/L	0.018	77	5156	5084	0
	V-1	51	0.004	ug/L	0.001	25	130	173	11
	Cr	52	0.079	ug/L	0.066	83	15247	15041	0
	Cr	53	0.017	ug/L	0.005	30	115	129	0
	Mn	55	0.020	ug/L	0.001	7	250	549	1
	Co	59	0.003	ug/L	0.001	34	40	71	12
>	Ge	72		ug/L			457613	435796	2
	Ni	60	0.003	ug/L	0.001	27	22	29	5
	Ni	62	0.035	ug/L	0 013	35	29	41	9
	Cu	63	0.038	ug/L	0.004	11	58	282	8
	Cu	65	0.035	ug/L	0.001	3	28	120	3
	Zn	66	0.095	ug/L	0.007	7	143	286	5
	Zn	67	0.081	ug/L	0.008	9	23	43	6
	Zn	68	0.086	ug/L	0.023	27	137	229	13
	As	75	-0.002	ug/L	0.027	1323	267	252	16
	As-1	75	0.431	ug/L	0.052	12	8149	8393	1
	Se	82	-0.001	ug/L	0.106	9193	-5	-5	326
	Se	78	1.592	ug/L	0.225	14	8278	8529	1
	Mo	98	0.001	ug/L	0.001	175	17	18	24
	Y	89		ug/L			298590	283029	2
	Kr	83		ug/L			554	542	7
>	In	115		ug/L			979916	894967	2
	Ag	107	0.001	ug/L	0.000	29	15	24	15
	Cd	111	0.001	ug/L	0.001	44	63	64	6
	Cd	114	0.000	ug/L	0.000	52	30	32	6
	Sb	121	0.013	ug/L	0.002	15	102	279	13
	Sb	123	0.015	ug/L	0.001	9	72	223	9
	Ba	135	0.009	ug/L	0.002	21	11	46	17
	Ba	137	0.008	ug/L	0 001	8	17	70	3
>	Tb	159		ug/L			1160798	992514	0
	Tl	205	0.004	ug/L	0.001	27	51	163	19
	Pb	208	0.003	ug/L	0.001	25	139	240	12
	Bi	209		ug/L			2367270	2130335	1
	Th	232	0.056	ug/L	0.008	14	21	2017	14
	U	238	0.000	ug/L	0.000	10	3	17	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:16:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	652734	2
	Be	9	27.491	ug/L	0.079	0	5	55606	2
	C	13		ug/L			58801	56855	2
	Cl	37		ug/L			3025336	3038043	2
>	Sc	45		ug/L			671354	633444	2
	V	51	26.285	ug/L	0.710	2	5156	352538	1
	V-1	51	26.420	ug/L	0.764	2	130	349307	1
	Cr	52	26.430	ug/L	0.432	1	15247	317390	0
	Cr	53	26.870	ug/L	0.645	2	115	34831	0
	Mn	55	26.487	ug/L	1.009	3	250	418811	1
	Co	59	26.465	ug/L	0.123	0	40	324870	1
>	Ge	72		ug/L			457613	446398	0
	Ni	60	26.648	ug/L	0.158	0	22	72106	0
	Ni	62	27.107	ug/L	0.266	0	29	10335	1
	Cu	63	26.636	ug/L	0.556	2	58	161834	1
	Cu	65	27.518	ug/L	0.357	1	28	75550	1
	Zn	66	85.447	ug/L	2.259	2	143	138301	2
	Zn	67	79.871	ug/L	2.485	3	23	21071	2
	Zn	68	83.115	ug/L	1.092	1	137	96814	1
	As	75	25.998	ug/L	0.176	0	267	39453	0
	As-1	75	26.486	ug/L	0.279	1	8149	47840	0
	Se	82	83.066	ug/L	0.901	1	-5	13629	0
	Se	78	84.938	ug/L	1.214	1	8278	43396	0
	Mo	98	24.281	ug/L	0.259	1	17	105231	1
	Y	89		ug/L			298590	289391	2
	Kr	83		ug/L			554	536	3
>	In	115		ug/L			979916	921269	0
	Ag	107	25.250	ug/L	0.489	1	15	324433	1
	Cd	111	26.013	ug/L	0.222	0	63	116699	0
	Cd	114	26.128	ug/L	0.175	0	30	291394	0
	Sb	121	25.908	ug/L	0.047	0	102	368928	0
	Sb	123	25.910	ug/L	0.371	1	72	282730	0
	Ba	135	26.228	ug/L	0.372	1	11	104776	1
	Ba	137	26.300	ug/L	0.197	0	17	181427	0
>	Tb	159		ug/L			1160798	1042846	0
	Tl	205	28.103	ug/L	0.113	0	51	844874	0
	Pb	208	27.602	ug/L	0.342	1	139	1094874	0
	Bi	209		ug/L			2367270	2199658	0
	Th	232	27.541	ug/L	0.383	1	21	1041878	1
	U	238	27.701	ug/L	0 127	0	3	1065863	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:21:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	**Li**	**6**		ug/L			726304	659810	3
	Be	**9**	**0.149**	ug/L	0.004	2	5	310	4
	C	**13**		ug/L			58801	65054	0
	Cl	**37**		ug/L			3025336	3122149	1
>	**Sc**	**45**		ug/L			671354	639983	0
	V	**51**	**6.811**	ug/L	0.144	2	5156	95961	1
	V-1	**51**	**6.880**	ug/L	0.140	2	130	92020	1
	Cr	**52**	**8.956**	ug/L	0.175	1	15247	118292	1
	Cr	**53**	**9.186**	ug/L	0.194	2	115	12106	1
	Mn	**55**	**411.530**	ug/L	13.290	3	250	6574111	2
	Co	**59**	**2.147**	ug/L	0.039	1	40	26664	1
>	**Ge**	**72**		ug/L			457613	458183	1
	Ni	**60**	**6.064**	ug/L	0.110	1	22	16857	1
	Ni	**62**	**6.423**	ug/L	0.186	2	29	2535	1
	Cu	**63**	**4.560**	ug/L	0.044	0	58	28490	2
	Cu	**65**	**4.631**	ug/L	0.051	1	28	13071	1
	Zn	**66**	**32.399**	ug/L	0.131	0	143	53919	1
	Zn	**67**	**37.328**	ug/L	0.455	1	23	10120	1
	Zn	**68**	**36.413**	ug/L	0.560	1	137	43608	1
	As	**75**	**1.929**	ug/L	0.029	1	267	3252	0
	As-1	**75**	**2.102**	ug/L	0 053	2	8149	11408	0
	Se	**82**	**0.132**	ug/L	0.077	58	-5	16	76
	Se	**78**	**0.673**	ug/L	0.162	24	8278	8575	0
	Mo	**98**	**0.111**	ug/L	0.004	3	17	508	2
	Y	**89**		ug/L			298590	314998	1
	Kr	**83**		ug/L			554	511	2
>	**In**	**115**		ug/L			979916	938320	1
	Ag	**107**	**0.026**	ug/L	0.002	6	15	349	7
	Cd	**111**	**0.614**	ug/L	0.005	0	63	2864	1
	Cd	**114**	**0.591**	ug/L	0.017	2	30	6743	1
	Sb	**121**	**0.042**	ug/L	0.003	6	102	706	7
	Sb	**123**	**0.043**	ug/L	0.003	6	72	543	6
	Ba	**135**	**118.089**	ug/L	1.203	1	11	480432	1
	Ba	**137**	**116.205**	ug/L	2.052	1	17	816284	0
>	**Tb**	**159**		ug/L			1160798	1053119	1
	Tl	**205**	**0.060**	ug/L	0.001	1	51	1882	0
	Pb	**208**	**29.278**	ug/L	0.287	0	139	1172753	0
	Bi	**209**		ug/L			2367270	2210131	0
	Th	**232**	**0.934**	ug/L	0.100	10	21	35715	10
	U	**238**	**0.101**	ug/L	0.004	3	3	3937	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:25:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

~~Mn, Ba~~

200x

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	658425	1
	Be	**9**	**0.738**	ug/L	0.017	2	5	1510	1
	C	**13**		ug/L			58801	91809	1
	Cl	**37**		ug/L			3025336	3121092	0
>	**Sc**	**45**		ug/L			671354	708733	0
	V	**51**	**32.110**	ug/L	0.580	1	5156	480751	0
	V-1	**51**	**32.027**	ug/L	0.347	1	130	473892	0
	Cr	**52**	**42.379**	ug/L	1.064	2	15247	559748	1
	Cr	**53**	**42.130**	ug/L	0.213	0	115	61057	0
	Mn	**55**	**1883.119**	ug/L	26.628	1	250	33314547	1
	Co	**59**	**9.767**	ug/L	0.008	0	40	134185	0
>	**Ge**	**72**		ug/L			457613	458066	0
	Ni	**60**	**30.272**	ug/L	0.197	0	22	84048	0
	Ni	**62**	**32.351**	ug/L	0.731	2	29	12651	2
	Cu	**63**	**22.539**	ug/L	0.451	1	58	140530	1
	Cu	**65**	**22.870**	ug/L	0.112	0	28	64435	1
	Zn	**66**	**153.550**	ug/L	3.407	2	143	254914	1
	Zn	**67**	**178.161**	ug/L	1.761	0	23	48204	0
	Zn	**68**	**169.099**	ug/L	5.740	3	137	201948	2
	As	**75**	**9.640**	ug/L	0 130	1	267	15180	0
	As-1	**75**	**9.784**	ug/L	0.160	1	8149	23277	0
	Se	**82**	**-0.006**	ug/L	0.063	1126	-5	-6	169
	Se	**78**	**0.809**	ug/L	0.102	12	8278	8631	0
	Mo	**98**	**0.403**	ug/L	0.012	3	17	1807	2
	Y	**89**		ug/L			298590	394045	0
	Kr	**83**		ug/L			554	731	3
>	**In**	**115**		ug/L			979916	927280	0
	Ag	**107**	**0.109**	ug/L	0.005	4	15	1429	4
	Cd	**111**	**2.968**	ug/L	0.055	1	63	13454	2
	Cd	**114**	**2.890**	ug/L	0.040	1	30	32470	1
	Sb	**121**	**0.113**	ug/L	0.003	3	102	1715	2
	Sb	**123**	**0.118**	ug/L	0.006	5	72	1365	4
	Ba	**135**	**602.318**	ug/L	6.484	1	11	2421603	0
	Ba	**137**	**592.169**	ug/L	2.462	0	17	4111490	0
>	**Tb**	**159**		ug/L			1160798	1090266	0
	Tl	**205**	**0.260**	ug/L	0.006	2	51	8220	1
	Pb	**208**	**141.780**	ug/L	0.982	0	139	5879097	0
	Bi	**209**		ug/L			2367270	2161536	0
	Th	**232**	**3.575**	ug/L	0.035	0	21	141404	1
	U	**238**	**0.489**	ug/L	0.007	1	3	19667	1

VR30 : 092513

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:29:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, B~~
11.16.12 MJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660484	1
	Be	9	0.692	ug/L	0.035	5	5	1420	3
	C	13		ug/L			58801	96600	1
	Cl	37		ug/L			3025336	3188144	1
>	Sc	45		ug/L			671354	700601	0
	V	51	31.403	ug/L	0.693	2	5156	464916	1
	V-1	51	31.630	ug/L	0.860	2	130	462649	2
	Cr	52	42.696	ug/L	0.715	1	15247	557419	1
	Cr	53	43.465	ug/L	1.149	2	115	62263	2
	Mn	55	1813.932	ug/L	25.407	1	250	31722585	0
	Co	59	9.095	ug/L	0.068	0	40	123512	0
>	Ge	72		ug/L			457613	451524	1
	Ni	60	29.754	ug/L	0.416	1	22	81422	0
	Ni	62	32.092	ug/L	1 039	3	29	12367	1
	Cu	63	21.961	ug/L	0.414	1	58	134952	0
	Cu	65	22.411	ug/L	0.507	2	28	62226	0
	Zn	66	153.158	ug/L	2.241	1	143	250621	0
	Zn	67	179.789	ug/L	6.313	3	23	47935	2
	Zn	68	171.662	ug/L	2 773	1	137	202074	0
	As	75	9.733	ug/L	0.033	0	267	15104	1
	As-1	75	9.983	ug/L	0.131	1	8149	23247	0
	Se	82	0.025	ug/L	0.019	75	-5	-1	281
	Se	78	1.216	ug/L	0.387	31	8278	8678	0
	Mo	98	0.411	ug/L	0.022	5	17	1819	3
	Y	89		ug/L			298590	385227	1
	Kr	83		ug/L			554	715	0
>	In	115		ug/L			979916	930091	1
	Ag	107	0.111	ug/L	0.007	6	15	1448	5
	Cd	111	2.896	ug/L	0.068	2	63	13170	2
	Cd	114	2.805	ug/L	0.014	0	30	31601	1
	Sb	121	0.104	ug/L	0.007	6	102	1595	4
	Sb	123	0.106	ug/L	0.005	5	72	1236	3
	Ba	135	603.049	ug/L	9.409	1	11	2431548	0
	Ba	137	588.890	ug/L	17.888	3	17	4099548	1
>	Tb	159		ug/L			1160798	1091942	1
	Tl	205	0.257	ug/L	0.002	0	51	8138	0
	Pb	208	137.098	ug/L	1.730	1	139	5693255	0
	Bi	209		ug/L			2367270	2134355	1
	Th	232	3.028	ug/L	0 045	1	21	119947	0
	U	238	0.478	ug/L	0.008	1	3	19241	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:33:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn, Ba
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	645469	1
	Be	9	27.666	ug/L	0.170	0	5	55337	0
	C	13		ug/L			58801	83861	1
	Cl	37		ug/L			3025336	3184038	1
>	Sc	45		ug/L			671354	697616	0
	V	51	60.538	ug/L	0.659	1	5156	887489	0
	V-1	51	61.562	ug/L	0.603	0	130	896527	0
	Cr	52	73.167	ug/L	0.297	0	15247	939872	0
	Cr	53	76.545	ug/L	0.768	1	115	109095	1
	Mn	55	1775.803	ug/L	37.565	2	250	30921698	1
	Co	59	33.627	ug/L	0.301	0	40	454613	0
>	Ge	72		ug/L			457613	449956	1
	Ni	60	58.182	ug/L	0.364	0	22	158657	1
	Ni	62	61.318	ug/L	0.359	0	29	23528	1
	Cu	63	48.335	ug/L	0.991	2	58	295965	2
	Cu	65	48.901	ug/L	1.816	3	28	135259	2
	Zn	66	228.669	ug/L	4.171	1	143	372803	0
	Zn	67	248.745	ug/L	4.490	1	23	66093	0
	Zn	68	246.861	ug/L	4.229	1	137	289535	0
	As	75	34.451	ug/L	0.089	0	267	52612	1
	As-1	75	34.846	ug/L	0.662	1	8149	60913	2
	Se	82	77.361	ug/L	1.455	1	-5	12792	0
	Se	78	79.279	ug/L	2.044	2	8278	41365	1
	Mo	98	21.842	ug/L	0.580	2	17	95402	2
	Y	89		ug/L			298590	390645	0
	Kr	83		ug/L			554	764	3
>	In	115		ug/L			979916	929781	0
	Ag	107	21.987	ug/L	0.128	0	15	285138	0
	Cd	111	27.484	ug/L	0.328	1	63	124443	1
	Cd	114	27.276	ug/L	0.263	0	30	307001	0
	Sb	121	1.604	ug/L	0.013	0	102	23137	0
	Sb	123	1.593	ug/L	0 023	1	72	17603	0
	Ba	135	600.886	ug/L	7.185	1	11	2422373	1
	Ba	137	592.539	ug/L	5.461	0	17	4125010	0
>	Tb	159		ug/L			1160798	1089659	0
	Tl	205	26.111	ug/L	0.165	0	51	820217	0
	Pb	208	155.382	ug/L	1.273	0	139	6439407	0
	Bi	209		ug/L			2367270	2127905	0
	Th	232	28.125	ug/L	0.527	1	21	1111662	1
	U	238	26.956	ug/L	0.223	0	3	1083740	0

VR30 : 88258

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:37:33
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	664283	2
	Be	9	29.538	ug/L	0.358	1	5	60794	1
	C	13		ug/L			58801	93673	2
	Cl	37		ug/L			3025336	3208810	2
>	Sc	45		ug/L			671354	696608	3
	V	51	57.760	ug/L	1.117	1	5156	845461	1
	V-1	51	58.198	ug/L	1.068	1	130	846019	1
	Cr	52	67.373	ug/L	2.309	3	15247	864844	0
	Cr	53	68.828	ug/L	2.146	3	115	97906	0
	Mn	55	1909.476	ug/L	89.815	4	250	33175034	2
	Co	59	35.805	ug/L	1.809	5	40	482853	1
>	Ge	72		ug/L			457613	453327	1
	Ni	60	57.563	ug/L	1.450	2	22	158108	0
	Ni	62	59.298	ug/L	0.873	1	29	22922	0
	Cu	63	50.597	ug/L	0.729	1	58	312108	0
	Cu	65	51.323	ug/L	1 627	3	28	143023	1
	Zn	66	241.533	ug/L	4.196	1	143	396728	1
	Zn	67	258.923	ug/L	8.397	3	23	69317	3
	Zn	68	256.723	ug/L	5.203	2	137	303346	1
	As	75	37.743	ug/L	0.705	1	267	58039	1
	As-1	75	38.375	ug/L	0.888	2	8149	66759	1
	Se	82	88.120	ug/L	2.422	2	-5	14679	1
	Se	78	90.822	ug/L	2.891	3	8278	46545	1
	Mo	98	22.087	ug/L	0.748	3	17	97189	2
	Y	89		ug/L			298590	389286	1
	Kr	83		ug/L			554	724	5
>	In	115		ug/L			979916	935270	0
	Ag	107	22.990	ug/L	0.689	2	15	299932	3
	Cd	111	30.060	ug/L	0.249	0	63	136902	1
	Cd	114	30.117	ug/L	0.182	0	30	340979	0
	Sb	121	22.882	ug/L	0.472	2	102	330814	2
	Sb	123	22.452	ug/L	0.520	2	72	248751	2
	Ba	135	619.033	ug/L	8.400	1	11	2510292	1
	Ba	137	604.360	ug/L	9.137	1	17	4232093	1
>	Tb	159		ug/L			1160798	1103567	0
	Tl	205	28.747	ug/L	0.701	2	51	914623	2
	Pb	208	166.327	ug/L	2.344	1	139	6980910	0
	Bi	209		ug/L			2367270	2147383	0
	Th	232	31.710	ug/L	0.458	1	21	1269491	1
	U	238	29.697	ug/L	0.471	1	3	1209252	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:41:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	658736	3
	Be	9	1.198	ug/L	0.029	2	5	2448	1
	C	13		ug/L			58801	82676	1
	Cl	37		ug/L			3025336	3128837	2
>	Sc	45		ug/L			671354	710302	1
	V	51	41.498	ug/L	1.214	2	5156	620945	1
	V-1	51	41.904	ug/L	1.352	3	130	621179	1
	Cr	52	29.148	ug/L	0.619	2	15247	390842	0
	Cr	53	30.448	ug/L	1.142	3	115	44239	1
	Mn	55	1741.837	ug/L	40.934	2	250	30878157	1
	Co	59	11.983	ug/L	0.119	0	40	164961	0
>	Ge	72		ug/L			457613	445188	1
	Ni	60	20.428	ug/L	0.273	1	22	55124	0
	Ni	62	21.533	ug/L	0.705	3	29	8191	1
	Cu	63	17.746	ug/L	0.499	2	58	107526	1
	Cu	65	17.873	ug/L	0.604	3	28	48933	2
	Zn	66	221.841	ug/L	2.195	0	143	357893	1
	Zn	67	274.253	ug/L	7.881	2	23	72089	1
	Zn	68	262.775	ug/L	6.703	2	137	304890	0
	As	75	13.448	ug/L	0.274	2	267	20475	1
	As-1	75	13.677	ug/L	0.357	2	8149	28466	0
	Se	82	-0.098	ug/L	0.036	36	-5	-21	28
	Se	78	1.151	ug/L	0.426	37	8278	8529	0
	Mo	98	0.681	ug/L	0.007	0	17	2959	2
	Y	89		ug/L			298590	400439	0
	Kr	83		ug/L			554	783	1
>	In	115		ug/L			979916	909481	1
	Ag	107	0.125	ug/L	0.005	4	15	1595	3
	Cd	111	2.066	ug/L	0.033	1	63	9204	0
	Cd	114	1.957	ug/L	0.011	0	30	21569	1
	Sb	121	0.113	ug/L	0.007	6	102	1684	5
	Sb	123	0.117	ug/L	0.010	8	72	1326	7
	Ba	135	1037.342	ug/L	18.539	1	11	4090096	0
	Ba	137	1027.145	ug/L	23.355	2	17	6994160	2
>	Tb	159		ug/L			1160798	1101185	1
	Tl	205	0.242	ug/L	0.008	3	51	7726	2
	Pb	208	82.938	ug/L	1 271	1	139	3473170	0
	Bi	209		ug/L			2367270	2108586	0
	Th	232	3.804	ug/L	0.070	1	21	151931	0
	U	238	0.450	ug/L	0.013	2	3	18289	1

VR30 B SWN

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:46:52
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	679095	0
	Be	9	0.996	ug/L	0.005	0	5	2101	0
	C	13		ug/L			58801	81604	2
	Cl	37		ug/L			3025336	3152565	1
>	Sc	45		ug/L			671354	720489	1
	V	51	35.318	ug/L	0.386	1	5156	537019	1
	V-1	51	35.408	ug/L	0.490	1	130	532576	1
	Cr	52	27.857	ug/L	0.466	1	15247	379635	0
	Cr	53	28.133	ug/L	0.823	2	115	41477	1
	Mn	55	935.145	ug/L	24.403	2	250	16814823	1
	Co	59	9.378	ug/L	0.169	1	40	130952	0
>	Ge	72		ug/L			457613	454787	1
	Ni	60	25.938	ug/L	1.038	4	22	71474	2
	Ni	62	27.951	ug/L	0.499	1	29	10855	1
	Cu	63	20.965	ug/L	0.543	2	58	129757	1
	Cu	65	21.178	ug/L	0.617	2	28	59230	2
	Zn	66	134.335	ug/L	1.580	1	143	221432	0
	Zn	67	155.238	ug/L	2.024	1	23	41701	0
	Zn	68	147.173	ug/L	2.502	1	137	174517	0
	As	75	9.981	ug/L	0.112	1	267	15593	0
	As-1	75	10.176	ug/L	0.279	2	8149	23709	0
	Se	82	-0.231	ug/L	0.010	4	-5	-43	3
	Se	78	1.015	ug/L	0.616	60	8278	8654	1
	Mo	98	0.323	ug/L	0.022	6	17	1443	5
	Y	89		ug/L			298590	410327	0
	Kr	83		ug/L			554	858	3
>	In	115		ug/L			979916	920415	0
	Ag	107	0.176	ug/L	0.005	2	15	2276	2
	Cd	111	1.202	ug/L	0.026	2	63	5445	1
	Cd	114	1.032	ug/L	0.007	0	30	11525	0
	Sb	121	0.060	ug/L	0.002	3	102	955	2
	Sb	123	~~0.061~~	ug/L	0.003	4	72	730	3
	Ba	135	450.552	ug/L	4.820	1	11	1798036	0
	Ba	137	443.254	ug/L	5.175	1	17	3054635	0
>	Tb	159		ug/L			1160798	1091144	0
	Tl	205	0.177	ug/L	0.002	1	51	5604	0
	Pb	208	64.259	ug/L	0.461	0	139	2666772	0
	Bi	209		ug/L			2367270	2150466	0
	Th	232	4.636	ug/L	0.085	1	21	183512	1
	U	238	0.943	ug/L	0.015	1	3	37956	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:50:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669560	1
	Be	9	1.104	ug/L	0.037	3	5	2295	3
	C	13		ug/L			58801	83986	0
	Cl	37		ug/L			3025336	3077675	2
>	Sc	45		ug/L			671354	701312	0
	V	51	35.711	ug/L	0.223	0	5156	528517	0
	V-1	51	35.889	ug/L	0.267	0	130	525497	1
	Cr	52	24.080	ug/L	0.237	0	15247	321637	0
	Cr	53	24.634	ug/L	0.394	1	115	35379	1
	Mn	55	769.488	ug/L	9.718	1	250	13471579	1
	Co	59	9.244	ug/L	0.085	0	40	125661	0
>	Ge	72		ug/L			457613	450092	2
	Ni	60	29.837	ug/L	0.331	1	22	81389	1
	Ni	62	30.947	ug/L	1.270	4	29	11886	2
	Cu	63	24.449	ug/L	0.868	3	58	149705	1
	Cu	65	24.872	ug/L	0.020	0	28	68855	2
	Zn	66	136.839	ug/L	1.935	1	143	223218	1
	Zn	67	156.779	ug/L	3.352	2	23	41673	1
	Zn	68	148.239	ug/L	3.979	2	137	173950	2
	As	75	11.121	ug/L	0.231	2	267	17162	1
	As-1	75	11.368	ug/L	0.306	2	8149	25271	0
	Se	82	-0.242	ug/L	0.053	21	-5	-45	18
	Se	78	1.366	ug/L	0.520	38	8278	8712	0
	Mo	98	0.365	ug/L	0.009	2	17	1609	0
	Y	89		ug/L			298590	471766	2
	Kr	83		ug/L			554	943	4
>	In	115		ug/L			979916	918949	2
	Ag	107	0.213	ug/L	0.007	3	15	2744	0
	Cd	111	1.348	ug/L	0.051	3	63	6083	1
	Cd	114	1.176	ug/L	0.037	3	30	13105	0
	Sb	121	0.072	ug/L	0.003	3	102	1114	1
	Sb	123	0.068	ug/L	0.002	2	72	810	3
	Ba	135	426.385	ug/L	10.242	2	11	1698233	0
	Ba	137	418.457	ug/L	13.953	3	17	2877633	0
>	Tb	159		ug/L			1160798	1091122	1
	Tl	205	0.184	ug/L	0.000	0	51	5831	1
	Pb	208	75.544	ug/L	0.496	0	139	3134968	0
	Bi	209		ug/L			2367270	2115487	1
	Th	232	4.885	ug/L	0.078	1	21	193372	0
	U	238	1.635	ug/L	0.033	2	3	65806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:55:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641685 ✓	1
	Be	9	54.512	ug/L	2.100	3	5	108341	2
	C	13		ug/L			58801	56162	2
	Cl	37		ug/L			3025336	3214467	2
>	Sc	45		ug/L			671354	632166 ✓	1
	V	51	49.710	ug/L	0.261	0	5156	661244	1
	V-1	51	50.166	ug/L	0.458	0	130	662001	1
	Cr	52	49.490	ug/L	0.989	1	15247	580581	0
	Cr	53	50.983	ug/L	2.071	4	115	65847	2
	Mn	55	49.976	ug/L	0.210	0	250	788852	1
	Co	59	50.644	ug/L	1.932	3	40	620117	1
>	Ge	72		ug/L			457613	461866 ✓	1
	Ni	60	48.895	ug/L	1.551	3	22	136836	1
	Ni	62	48.774	ug/L	0.969	1	29	19215	1
	Cu	63	48.836	ug/L	0.554	1	58	306939	0
	Cu	65	48.413	ug/L	1.406	2	28	137469	1
	Zn	66	47.973	ug/L	1.152	2	143	80394	1
	Zn	67	50.183	ug/L	0.804	1	23	13706	0
	Zn	68	49.406	ug/L	0 573	1	137	59595	0
	As	75	48.756	ug/L	0.776	1	267	76307	0
	As-1	75	48.904	ug/L	0.779	1	8149	84424	0
	Se	82	49.294	ug/L	1.118	2	-5	8364	1
	Se	78	49.733	ug/L	1.217	2	8278	29750	0
	Mo	98	45.466	ug/L	0.456	1	17	203844	0
	Y	89		ug/L			298590	299481	0
	Kr	83		ug/L			554	527	2
>	In	115		ug/L			979916	915111 ✓	0
	Ag	107	45.975	ug/L	0 468	1	15	586791	0
	Cd	111	50.233	ug/L	0.563	1	63	223804	1
	Cd	114	50.026	ug/L	0.450	0	30	554183	1
	Sb	121	49.846	ug/L	0.359	0	102	704965	0
	Sb	123	49.501	ug/L	0.417	0	72	536533	1
	Ba	135	49.533	ug/L	1.026	2	11	196558	2
	Ba	137	49.666	ug/L	0.337	0	17	340329	1
>	Tb	159		ug/L			1160798	1036888 ✓	0
	Tl	205	51.651	ug/L	0.439	0	51	1543867	0
	Pb	208	50.984	ug/L	0.249	0	139	2010693	0
	Bi	209		ug/L			2367270	2144029	0
	Th	232	51.869	ug/L	0.105	0	21	1951035	0
	U	238	53.450	ug/L	0.641	1	3	2044835	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:02:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	624890	1
	Be	9	0.001	ug/L	0.000	24	5	7	7
	C	13		ug/L			58801	58264	3
	Cl	37		ug/L			3025336	3091372	1
>	Sc	45		ug/L			671354	620879	1
	V	51	0.036	ug/L	0.009	24	5156	5231	2
	V-1	51	0.002	ug/L	0.001	73	130	145	12
	Cr	52	0.121	ug/L	0.027	22	15247	15462	1
	Cr	53	0.011	ug/L	0.012	110	115	120	11
	Mn	55	0.007	ug/L	0.003	38	250	347	13
	Co	59	0.001	ug/L	0.000	9	40	53	2
>	Ge	72		ug/L			457613	442099	0
	Ni	60	-0.001	ug/L	0.002	264	22	20	19
	Ni	62	0.053	ug/L	0.012	22	29	48	9
	Cu	63	0.005	ug/L	0.001	28	58	84	9
	Cu	65	0.001	ug/L	0.002	185	28	31	21
	Zn	66	-0.004	ug/L	0.004	115	143	132	4
	Zn	67	0.001	ug/L	0.004	685	23	23	4
	Zn	68	0.010	ug/L	0.005	49	137	143	3
	As	75	-0.010	ug/L	0.012	121	267	244	6
	As-1	75	0.401	ug/L	0.069	17	8149	8470	0
	Se	82	0.022	ug/L	0.007	32	-5	-1	75
	Se	78	1.493	ug/L	0.240	16	8278	8612	0
	Mo	98	0.006	ug/L	0.001	25	17	41	15
	Y	89		ug/L			298590	280031	0
	Kr	83		ug/L			554	529	2
>	In	115		ug/L			979916	897436	0
	Ag	107	0.002	ug/L	0.000	8	15	33	4
	Cd	111	0.002	ug/L	0.000	27	63	65	3
	Cd	114	0.001	ug/L	0.001	91	30	35	19
	Sb	121	0.050	ug/L	0.002	4	102	783	4
	Sb	123	0.050	ug/L	0.004	7	72	593	6
	Ba	135	0.003	ug/L	0.003	105	11	21	51
	Ba	137	0.003	ug/L	0.000	16	17	33	9
>	Tb	159		ug/L			1160798	990519	0
	Tl	205	0.009	ug/L	0.004	44	51	292	38
	Pb	208	0.002	ug/L	0.001	26	139	190	10
	Bi	209		ug/L			2367270	2129554	0
	Th	232	0.093	ug/L	0.005	5	21	3364	4
	U	238	0.001	ug/L	0.000	8	3	54	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	632346	0
	Be	9	0.002	ug/L	0.001	54	5	8	24
	C	13		ug/L			58801	59327	3
	Cl	37		ug/L			3025336	3058708	0
>	Sc	45		ug/L			671354	628473	0
	V	51	< 0.032	ug/L	0.006	18	5156	5246	1
	V-1	51	0.003	ug/L	0.000	9	130	163	2
	Cr	52	< 0.116	ug/L	0 013	11	15247	15588	1
	Cr	53	0.022	ug/L	0.007	32	115	136	6
	Mn	55	0.021	ug/L	0.002	11	250	569	6
	Co	59	< 0.004	ug/L	0.000	10	40	92	6
>	Ge	72		ug/L			457613	443392	1
	Ni	60	< 0.003	ug/L	0.001	44	22	29	11
	Ni	62	0.010	ug/L	0.014	136	29	32	15
	Cu	63	< 0.052	ug/L	0 001	1	58	369	1
	Cu	65	0.043	ug/L	0.004	9	28	145	7
	Zn	66	< 0.236	ug/L	0.013	5	143	516	3
	Zn	67	0.194	ug/L	0.070	36	23	73	25
	Zn	68	0.224	ug/L	0.009	3	137	391	1
	As	75	< -0.001	ug/L	0.022	2450	267	258	13
	As-1	75	0.451	ug/L	0.089	19	8149	8569	0
	Se	82	< 0.044	ug/L	0.075	169	-5	2	585
	Se	78	1.676	ug/L	0.328	19	8278	8712	0
	Mo	98	0.002	ug/L	0.002	86	17	27	34
	Y	89		ug/L			298590	287646	1
	Kr	83		ug/L			554	537	4
>	In	115		ug/L			979916	904024	2
	Ag	107	< 0.001	ug/L	0.000	38	15	21	11
	Cd	111	< -0.001	ug/L	0.003	380	63	55	22
	Cd	114	0.001	ug/L	0.000	52	30	36	11
	Sb	121	< 0.013	ug/L	0.001	7	102	273	6
	Sb	123	0.013	ug/L	0.001	3	72	211	4
	Ba	135	0.006	ug/L	0.001	17	11	33	13
	Ba	137	0.008	ug/L	0.001	14	17	70	9
>	Tb	159		ug/L			1160798	987765	1
	Tl	205	< 0.005	ug/L	0.002	42	51	192	33
	Pb	208	< 0.004	ug/L	0.001	14	139	277	7
	Bi	209		ug/L			2367270	2121511	0
	Th	232	0.071	ug/L	0.011	15	21	2552	14
	U	238	0.001	ug/L	0.000	40	3	32	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:11:53
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	633675	0
	Be	9	27.347	ug/L	0.580	2	5	53700	2
	C	13		ug/L			58801	58399	3
	Cl	37		ug/L			3025336	3046858	0
>	Sc	45		ug/L			671354	625792	1
	V	51	25.834	ug/L	1.196	4	5156	342320	2
	V-1	51	26.178	ug/L	1.242	4	130	341878	3
	Cr	52	25.526	ug/L	0.437	1	15247	303332	0
	Cr	53	26.650	ug/L	0.601	2	115	34135	0
	Mn	55	25.752	ug/L	0.536	2	250	402478	2
	Co	59	26.502	ug/L	0.590	2	40	321339	0
>	Ge	72		ug/L			457613	454838	1
	Ni	60	25.378	ug/L	0.177	0	22	69966	0
	Ni	62	25.615	ug/L	0.566	2	29	9951	1
	Cu	63	25.734	ug/L	0.347	1	58	159320	1
	Cu	65	26.423	ug/L	0.159	0	28	73918	1
	Zn	66	81.468	ug/L	1.642	2	143	134365	1
	Zn	67	77.955	ug/L	0.044	0	23	20957	1
	Zn	68	79.266	ug/L	1.935	2	137	94068	1
	As	75	24.970	ug/L	0.384	1	267	38617	0
	As-1	75	25.380	ug/L	0.404	1	8149	47044	0
	Se	82	79.475	ug/L	0.449	0	-5	13286	0
	Se	78	81.014	ug/L	0.512	0	8278	42554	0
	Mo	98	22.523	ug/L	0.489	2	17	99443	1
	Y	89		ug/L			298590	289499	1
	Kr	83		ug/L			554	521	10
>	In	115		ug/L			979916	902731	0
	Ag	107	24.334	ug/L	0.524	2	15	306427	2
	Cd	111	25.424	ug/L	0.279	1	63	111769	1
	Cd	114	25.655	ug/L	0.313	1	30	280372	1
	Sb	121	25.374	ug/L	0.154	0	102	354054	1
	Sb	123	25.003	ug/L	0.052	0	72	267363	0
	Ba	135	25.791	ug/L	0.320	1	11	100963	1
	Ba	137	25.408	ug/L	0.143	0	17	171756	1
>	Tb	159		ug/L			1160798	1014593	1
	Tl	205	27.280	ug/L	0.461	1	51	797777	1
	Pb	208	26.986	ug/L	0.351	1	139	1041285	0
	Bi	209		ug/L			2367270	2144969	0
	Th	232	26.942	ug/L	0.691	2	21	991397	1
	U	238	27.195	ug/L	0.664	2	3	1017758	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	680889	0
	Be	9	1.296	ug/L	0.011	0	5	2740	0
	C	13		ug/L			58801	75830	1
	Cl	37		ug/L			3025336	3113816	1
>	Sc	45		ug/L			671354	740699 ✓	2
	V	51	40.768	ug/L	1.728	4	5156	635966	1
	V-1	51	41.120	ug/L	1.756	4	130	635392	1
	Cr	52	34.202	ug/L	0.608	1	15247	475304	1
	Cr	53	35.335	ug/L	0.543	1	115	53525	1
	Mn	55	403.174	ug/L	9.834	2	250	7451571	0
	Co	59	9.888	ug/L	0.333	3	40	141893	1
>	Ge	72		ug/L			457613	461505	1
	Ni	60	29.143	ug/L	0.561	1	22	81520	1
	Ni	62	31.577	ug/L	0.806	2	29	12441	2
	Cu	63	28.271	ug/L	0.247	0	58	177580	0
	Cu	65	29.107	ug/L	0.772	2	28	82604	1
	Zn	66	108.641	ug/L	5.015	4	143	181716	3
	Zn	67	132.371	ug/L	3.045	2	23	36091	2
	Zn	68	121.297	ug/L	1.737	1	137	145995	0
	As	75	8.969	ug/L	0.188	2	267	14246	1
	As-1	75	9.091	ug/L	0.258	2	8149	22372	0
	Se	82	~0.462	ug/L	0.133	28	-5	-83	25
	Se	78	0.987	ug/L	0.191	19	8278	8773	0
	Mo	98	0.336	ug/L	0.010	2	17	1520	3
	Y	89		ug/L			298590	561426	1
	Kr	83		ug/L			554	1122	2
>	In	115		ug/L			979916	909998	0
	Ag	107	0.265	ug/L	0.004	1	15	3378	2
	Cd	111	0.662	ug/L	0.027	4	63	2990	3
	Cd	114	0.355	ug/L	0.015	4	30	3938	3
	Sb	121	~0.051	ug/L	0.004	8	102	814	7
	Sb	123	0.050	ug/L	0.005	9	72	606	7
	Ba	135	413.310	ug/L	2.943	0	11	1630821	1
	Ba	137	405.032	ug/L	4.058	1	17	2759699	0
>	Tb	159		ug/L			1160798	1101527	0
	Tl	205	~0.152	ug/L	0.003	1	51	4866	1
	Pb	208	26.132	ug/L	0.041	0	139	1094903	0
	Bi	209		ug/L			2367270	2111347	1
	Th	232	5.715	ug/L	0.075	1	21	228403	1
	U	238	2.296	ug/L	0.018	0	3	93333	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	700795	1
	Be	9	1.299	ug/L	0.064	4	5	2824	4
	C	13		ug/L			58801	75246	3
	Cl	37		ug/L			3025336	3124450	0
>	Sc	45		ug/L			671354	740487	0
	V	51	40.627	ug/L	1.321	3	5156	634159	3
	V-1	51	40.838	ug/L	1.241	3	130	631411	3
	Cr	52	28.061	ug/L	0.122	0	15247	392974	0
	Cr	53	28.721	ug/L	0.468	1	115	43527	1
	Mn	55	592.016	ug/L	9.529	1	250	10943361	1
	Co	59	10.007	ug/L	0.350	3	40	143619	2
>	Ge	72		ug/L			457613	459196	0
	Ni	60	32.873	ug/L	0.439	1	22	91491	0
	Ni	62	33.926	ug/L	0.914	2	29	13298	2
	Cu	63	32.769	ug/L	1.195	3	58	204780	3
	Cu	65	33.291	ug/L	0.417	1	28	94011	0
	Zn	66	104.639	ug/L	2.018	1	143	174196	1
	Zn	67	127.613	ug/L	3.738	2	23	34619	2
	Zn	68	117.250	ug/L	2.204	1	137	140446	2
	As	75	9.680	ug/L	0.140	1	267	15278	0
	As-1	75	9.811	ug/L	0.133	1	8149	23376	0
	Se	82	ν 0.368	ug/L	0.112	30	-5	-67	28
	Se	78	1.121	ug/L	0.249	22	8278	8786	1
	Mo	98	0.350	ug/L	0.008	2	17	1578	2
	Y	89		ug/L			298590	617372	1
	Kr	83		ug/L			554	1123	3
>	In	115		ug/L			979916	920435	1
	Ag	107	0.382	ug/L	0.005	1	15	4921	2
	Cd	111	0.708	ug/L	0.015	2	63	3230	1
	Cd	114	0.400	ug/L	0.006	1	30	4483	0
	Sb	121	ν 0.028	ug/L	0.002	6	102	499	5
	Sb	123	0.030	ug/L	0.002	5	72	399	3
	Ba	135	376.487	ug/L	6.978	1	11	1502270	0
	Ba	137	371.381	ug/L	3.288	0	17	2559267	0
>	Tb	159		ug/L			1160798	1096597	1
	Tl	205	ν 0.171	ug/L	0.003	1	51	5451	1
	Pb	208	21.163	ug/L	0.422	1	139	882616	0
	Bi	209		ug/L			2367270	2087434	0
	Th	232	6.090	ug/L	0.086	1	21	242250	0
	U	238	2.787	ug/L	0.040	1	3	112736	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
rr Be
Sample Date/Time: Thursday, November 15, 2012 17:24:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	708238	0
	Be	9	1.202	ug/L	0.007	0	5	2644	0
	C	13		ug/L			58801	75490	0
	Cl	37		ug/L			3025336	3186111	3
>	Sc	45		ug/L			671354	761476	1
	V	51	36.439	ug/L	0.375	1	5156	585470	1
	V-1	51	36.671	ug/L	0.432	1	130	583031	2
	Cr	52	27.660	ug/L	0.533	1	15247	398537	0
	Cr	53	28.397	ug/L	0.581	2	115	44254	1
	Mn	55	393.048	ug/L	6.334	1	250	7470745	0
	Co	59	9.034	ug/L	0.164	1	40	133323	0
>	Ge	72		ug/L			457613	468129	2
	Ni	60	25.476	ug/L	0.559	2	22	72264	0
	Ni	62	27.265	ug/L	0.398	1	29	10899	1
	Cu	63	34.274	ug/L	1.207	3	58	218229	0
	Cu	65	34.660	ug/L	1.404	4	28	99712	1
	Zn	66	94.778	ug/L	3.819	4	143	160756	1
	Zn	67	114.160	ug/L	3.111	2	23	31566	2
	Zn	68	102.095	ug/L	3.304	3	137	124611	1
	As	75	7.682	ug/L	0.178	2	267	12415	1
	As-1	75	7.808	ug/L	0.342	4	8149	20659	0
	Se	82	-0.403	ug/L	0.077	19	-5	-74	18
	Se	78	1.061	ug/L	0.717	67	8278	8925	0
	Mo	98	0.256	ug/L	0.015	5	17	1178	2
	Y	89		ug/L			298590	686201	0
	Kr	83		ug/L			554	1138	4
>	In	115		ug/L			979916	915309	0
	Ag	107	0.636	ug/L	0.012	1	15	8134	1
	Cd	111	0.580	ug/L	0.042	7	63	2641	7
	Cd	114	0.270	ug/L	0.001	0	30	3019	1
	Sb	121	0.019	ug/L	0 003	16	102	363	11
	Sb	123	0.019	ug/L	0.003	14	72	274	10
	Ba	135	287.199	ug/L	1.237	0	11	1139823	1
	Ba	137	285.348	ug/L	3.697	1	17	1955464	0
>	Tb	159		ug/L			1160798	1107662	1
	Tl	205	0.163	ug/L	0.002	0	51	5243	1
	Pb	208	17.874	ug/L	0.139	0	139	753104	0
	Bi	209		ug/L			2367270	2087267	1
	Th	232	5.707	ug/L	0 083	1	21	229309	0
	U	238	3.097	ug/L	0.083	2	3	126574	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672119	1
	Be	9	0.931	ug/L	0.032	3	5	1944	4
	C	13		ug/L			58801	77697	1
	Cl	37		ug/L			3025336	3157728	1
>	Sc	45		ug/L			671354	693465	1
	V	51	32.303	ug/L	0.797	2	5156	473161	1
	V-1	51	32.381	ug/L	0.971	2	130	468746	2
	Cr	52	21.791	ug/L	0.178	0	15247	289321	1
	Cr	53	22.022	ug/L	0.506	2	115	31281	1
	Mn	55	842.080	ug/L	17.824	2	250	14575171	1
	Co	59	8.061	ug/L	0.207	2	40	108337	1
>	Ge	72		ug/L			457613	455755	2
	Ni	60	23.433	ug/L	0.621	2	22	64706	0
	Ni	62	24.856	ug/L	0.365	1	29	9675	1
	Cu	63	14.977	ug/L	0.613	4	58	92873	2
	Cu	65	15.188	ug/L	0.674	4	28	42552	2
	Zn	66	146.813	ug/L	4.157	2	143	242401	0
	Zn	67	170.687	ug/L	5.126	3	23	45925	0
	Zn	68	162.640	ug/L	4.463	2	137	193186	0
	As	75	9.413	ug/L	0.307	3	267	14745	0
	As-1	75	9.691	ug/L	0.394	4	8149	23006	0
	Se	82	< -0.334	ug/L	0.102	30	-5	-61	30
	Se	78	1.228	ug/L	0.379	30	8278	8763	1
	Mo	98	0.345	ug/L	0.016	4	17	1540	2
	Y	89		ug/L			298590	386526	2
	Kr	83		ug/L			554	869	6
>	In	115		ug/L			979916	923177	1
	Ag	107	< 0.197	ug/L	0.013	6	15	2547	4
	Cd	111	1.167	ug/L	0.009	0	63	5301	0
	Cd	114	1.012	ug/L	0.018	1	30	11336	0
	Sb	121	< 0.049	ug/L	0.002	4	102	790	2
	Sb	123	0.048	ug/L	0.003	6	72	588	5
	Ba	135	489.296	ug/L	11.355	2	11	1958089	0
	Ba	137	471.117	ug/L	8.931	1	17	3255918	0
>	Tb	159		ug/L			1160798	1065791	0
	Tl	205	< 0.139	ug/L	0.001	0	51	4304	1
	Pb	208	37.625	ug/L	0.292	0	139	1525218	0
	Bi	209		ug/L			2367270	2113366	0
	Th	232	4.344	ug/L	0.003	0	21	167958	1
	U	238	0.637	ug/L	0.002	0	3	25070	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:32:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	671473	3
	Be	9	0.843	ug/L	0.038	4	5	1757	1
	C	13		ug/L			58801	86867	0
	Cl	37		ug/L			3025336	3140166	1
>	Sc	45		ug/L			671354	694730	1
	V	51	32.021	ug/L	0.905	2	5156	470037	3
	V-1	51	32.226	ug/L	0.802	2	130	467476	3
	Cr	52	22.986	ug/L	0.414	1	15247	304821	0
	Cr	53	23.633	ug/L	0.242	1	115	33625	1
	Mn	55	1029.036	ug/L	28.522	2	250	17842112	1
	Co	59	8.138	ug/L	0.093	1	40	109582	0
>	Ge	72		ug/L			457613	456056	1
	Ni	60	19.485	ug/L	0.386	1	22	53878	2
	Ni	62	20.857	ug/L	0.399	1	29	8130	1
	Cu	63	19.133	ug/L	0.265	1	58	118775	0
	Cu	65	19.664	ug/L	0.518	2	28	55155	1
	Zn	66	124.248	ug/L	1.230	0	143	205396	0
	Zn	67	137.455	ug/L	2.581	1	23	37034	2
	Zn	68	132.929	ug/L	0.967	0	137	158103	0
	As	75	16.518	ug/L	0.204	1	267	25704	0
	As-1	75	16.805	ug/L	0.211	1	8149	33977	0
	Se	82	-0.045	ug/L	0.060	133	-5	-12	78
	Se	78	1.270	ug/L	0.069	5	8278	8789	0
	Mo	98	0.451	ug/L	0.022	4	17	2014	3
	Y	89		ug/L			298590	392096	0
	Kr	83		ug/L			554	730	2
>	In	115		ug/L			979916	931241	1
	Ag	107	0.093	ug/L	0.001	1	15	1219	1
	Cd	111	1.679	ug/L	0.023	1	63	7669	0
	Cd	114	1.608	ug/L	0.026	1	30	18149	1
	Sb	121	0.080	ug/L	0.003	4	102	1250	3
	Sb	123	0.082	ug/L	0.001	1	72	975	0
	Ba	135	277.351	ug/L	1.315	0	11	1119821	1
	Ba	137	277.746	ug/L	4.533	1	17	1936313	0
>	Tb	159		ug/L			1160798	1083148	1
	Tl	205	0.160	ug/L	0.005	3	51	5038	3
	Pb	208	70.984	ug/L	1.056	1	139	2923951	0
	Bi	209		ug/L			2367270	2126716	0
	Th	232	4.078	ug/L	0.043	1	21	160235	0
	U	238	0.771	ug/L	0.005	0	3	30806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	694379	0
	Be	9	0.751	ug/L	0.033	4	5	1620	3
	C	13		ug/L			58801	79704	1
	Cl	37		ug/L			3025336	3116892	1
>	Sc	45		ug/L			671354	701369	1
	V	51	27.606	ug/L	0.484	1	5156	409771	1
	V-1	51	27.572	ug/L	0.352	1	130	403749	0
	Cr	52	22.339	ug/L	0.214	0	15247	299539	0
	Cr	53	22.216	ug/L	0.271	1	115	31922	2
	Mn	55	1610.403	ug/L	40.654	2	250	28194174	2
	Co	59	8.784	ug/L	0.167	1	40	119427	2
>	Ge	72		ug/L			457613	461954	2
	Ni	60	24.177	ug/L	0.955	3	22	67666	1
	Ni	62	25.807	ug/L	0.637	2	29	10181	0
	Cu	63	16.297	ug/L	0.360	2	58	102464	0
	Cu	65	16.633	ug/L	0.360	2	28	47256	0
	Zn	66	131.048	ug/L	2.974	2	143	219400	1
	Zn	67	139.946	ug/L	2.376	1	23	38184	0
	Zn	68	135.161	ug/L	5.380	3	137	162755	2
	As	75	20.708	ug/L	0.772	3	267	32561	1
	As-1	75	20.912	ug/L	0.866	4	8149	40802	1
	Se	82	-0.135	ug/L	0.063	46	-5	-28	36
	Se	78	0.924	ug/L	0.366	39	8278	8752	0
	Mo	98	0.382	ug/L	0.007	1	17	1730	1
	Y	89		ug/L			298590	383834	1
	Kr	83		ug/L			554	773	2
>	In	115		ug/L			979916	933212	0
	Ag	107	0.124	ug/L	0.003	2	15	1633	1
	Cd	111	1.604	ug/L	0.050	3	63	7344	3
	Cd	114	1.524	ug/L	0.019	1	30	17245	1
	Sb	121	0.098	ug/L	0.004	4	102	1511	3
	Sb	123	0.101	ug/L	0.003	2	72	1184	3
	Ba	135	273.149	ug/L	4.551	1	11	1105199	1
	Ba	137	270.730	ug/L	4.598	1	17	1891580	1
>	Tb	159		ug/L			1160798	1075202	0
	Tl	205	0.197	ug/L	0.004	2	51	6155	1
	Pb	208	87.323	ug/L	0.925	1	139	3570933	0
	Bi	209		ug/L			2367270	2155438	2
	Th	232	4.326	ug/L	0.025	0	21	168766	1
	U	238	0.533	ug/L	0.003	0	3	21133	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:41:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	670867	2
	Be	9	0.738	ug/L	0.012	1	5	1540	2
	C	13		ug/L			58801	79897	1
	Cl	37		ug/L			3025336	3116504	1
>	Sc	45		ug/L			671354	679830	1
	V	51	26.498	ug/L	0.881	3	5156	381349	1
	V-1	51	26.510	ug/L	0.807	3	130	376173	1
	Cr	52	18.562	ug/L	0.849	4	15247	243759	2
	Cr	53	18.583	ug/L	0.614	3	115	25889	1
	Mn	55	958.176	ug/L	37.090	3	250	16253319	2
	Co	59	6.810	ug/L	0.176	2	40	89721	0
>	Ge	72		ug/L			457613	458129	1
	Ni	60	18.894	ug/L	0.523	2	22	52467	1
	Ni	62	20.510	ug/L	0.126	0	29	8033	1
	Cu	63	15.229	ug/L	0.111	0	58	94983	0
	Cu	65	15.195	ug/L	0.210	1	28	42824	0
	Zn	66	143.187	ug/L	2.413	1	143	237746	0
	Zn	67	147.734	ug/L	2.713	1	23	39978	0
	Zn	68	143.250	ug/L	2.043	1	137	171145	1
	As	75	12.043	ug/L	0.209	1	267	18898	0
	As-1	75	12.266	ug/L	0.268	2	8149	27115	0
	Se	82	-0.050	ug/L	0 042	83	-5	-13	51
	Se	78	0.991	ug/L	0.252	25	8278	8710	0
	Mo	98	0.462	ug/L	0.015	3	17	2071	3
	Y	89		ug/L			298590	383395	1
	Kr	83		ug/L			554	704	0
>	In	115		ug/L			979916	915967	0
	Ag	107	0.167	ug/L	0.004	2	15	2144	2
	Cd	111	1.604	ug/L	0.027	1	63	7211	2
	Cd	114	1.464	ug/L	0.022	1	30	16260	1
	Sb	121	0.097	ug/L	0.002	2	102	1466	1
	Sb	123	0.097	ug/L	0.004	4	72	1115	3
	Ba	135	206.064	ug/L	2.171	1	11	818418	1
	Ba	137	204.119	ug/L	1.458	0	17	1399955	1
>	Tb	159		ug/L			1160798	1068230	1
	Tl	205	0.157	ug/L	0.003	2	51	4870	0
	Pb	208	63.303	ug/L	1.438	2	139	2571448	0
	Bi	209		ug/L			2367270	2124075	1
	Th	232	4.069	ug/L	0.050	1	21	157697	0
	U	238	1.456	ug/L	0.043	2	3	57384	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:45:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660319	1
	Be	9	0.716	ug/L	0.017	2	5	1468	1
	C	13		ug/L			58801	88005	0
	Cl	37		ug/L			3025336	3087078	1
>	Sc	45		ug/L			671354	689069	1
	V	51	22.560	ug/L	0.653	2	5156	330014	3
	V-1	51	22.581	ug/L	0.587	2	130	324907	2
	Cr	52	14.376	ug/L	0.180	1	15247	194971	1
	Cr	53	14.425	ug/L	0.630	4	115	20398	3
	Mn	55	1281.819	ug/L	61.348	4	250	22041800	3
	Co	59	5.869	ug/L	0.124	2	40	78400	1
>	Ge	72		ug/L			457613	458567	0
	Ni	60	12.877	ug/L	0.231	1	22	35802	0
	Ni	62	14.204	ug/L	0.259	1	29	5577	2
	Cu	63	13.976	ug/L	0.209	1	58	87260	1
	Cu	65	14.244	ug/L	0.332	2	28	40180	1
	Zn	66	146.951	ug/L	2.181	1	143	244235	0
	Zn	67	161.885	ug/L	4.186	2	23	43848	2
	Zn	68	160.306	ug/L	1.892	1	137	191684	0
	As	75	10.226	ug/L	0.187	1	267	16103	1
	As-1	75	10.489	ug/L	0.231	2	8149	24393	0
	Se	82	~0.098	ug/L	0.040	40	-5	11	60
	Se	78	1.156	ug/L	0.214	18	8278	8789	0
	Mo	98	0.245	ug/L	0.002	0	17	1106	0
	Y	89		ug/L			298590	386451	1
	Kr	83		ug/L			554	631	2
>	In	115		ug/L			979916	929731	1
	Ag	107	~0.076	ug/L	0.003	3	15	1004	4
	Cd	111	1.949	ug/L	0.018	0	63	8879	0
	Cd	114	1.914	ug/L	0.009	0	30	21572	0
	Sb	121	~0.159	ug/L	0.001	0	102	2374	0
	Sb	123	0.159	ug/L	0.006	3	72	1816	4
	Ba	135	402.337	ug/L	6.590	1	11	1621745	0
	Ba	137	392.873	ug/L	2.875	0	17	2734942	1
>	Tb	159		ug/L			1160798	1071071	0
	Tl	205	~0.169	ug/L	0.004	2	51	5267	2
	Pb	208	80.066	ug/L	1.147	1	139	3261789	1
	Bi	209		ug/L			2367270	2139069	0
	Th	232	3.880	ug/L	0.017	0	21	150777	0
	U	238	0.816	ug/L	0.006	0	3	32234	0

VR30 : 092716

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:50:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	630489	2
	Be	9	55.409	ug/L	2.659	4	5	108178	2
	C	13		ug/L			58801	56806	2
	Cl	37		ug/L			3025336	3107422	2
>	Sc	45		ug/L			671354	636488	2
	V	51	50.167	ug/L	1.179	2	5156	671704	1
	V-1	51	50.537	ug/L	1.446	2	130	671321	1
	Cr	52	49.571	ug/L	0.854	1	15247	585565	1
	Cr	53	50.780	ug/L	1.486	2	115	66046	1
	Mn	55	50.043	ug/L	1.042	2	250	795117	0
	Co	59	50.727	ug/L	1.022	2	40	625522	0
>	Ge	72		ug/L			457613	459912	2
	Ni	60	48.098	ug/L	3.142	6	22	133953	4
	Ni	62	48.361	ug/L	0.890	1	29	18973	2
	Cu	63	48.371	ug/L	1.746	3	58	302613	1
	Cu	65	48.398	ug/L	1.546	3	28	136817	1
	Zn	66	48.938	ug/L	1.314	2	143	81652	1
	Zn	67	50.299	ug/L	0.751	1	23	13679	0
	Zn	68	49.441	ug/L	1 120	2	137	59372	0
	As	75	48.536	ug/L	1.180	2	267	75627	0
	As-1	75	48.938	ug/L	1.371	2	8149	84100	0
	Se	82	49.238	ug/L	0.882	1	-5	8319	0
	Se	78	50.574	ug/L	1.465	2	8278	29979	0
	Mo	98	44.653	ug/L	1.521	3	17	199314	2
	Y	89		ug/L			298590	294878	1
	Kr	83		ug/L			554	514	4
>	In	115		ug/L			979916	897000	1
	Ag	107	45.764	ug/L	1.181	2	15	572511	2
	Cd	111	50.813	ug/L	0.367	0	63	221917	1
	Cd	114	51.319	ug/L	0.263	0	30	557214	0
	Sb	121	50.554	ug/L	0.771	1	102	700774	0
	Sb	123	50.626	ug/L	0.466	0	72	537823	0
	Ba	135	50.130	ug/L	0.290	0	11	194968	0
	Ba	137	49.652	ug/L	0.382	0	17	333490	1
>	Tb	159		ug/L			1160798	1008137	0
	Tl	205	52.166	ug/L	0.690	1	51	1515994	1
	Pb	208	51.438	ug/L	0.232	0	139	1972384	0
	Bi	209		ug/L			2367270	2078769	1
	Th	232	52.422	ug/L	0.200	0	21	1917120	0
	U	238	53.884	ug/L	0.653	1	3	2004301	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	625174 ✓	1
	Be	9	-0.000	ug/L	0.001	948	5	4	44
	C	13		ug/L			58801	57806	0
	Cl	37		ug/L			3025336	3032251	0
>	Sc	45		ug/L			671354	603951 ✓	1
	V	51	0.037	ug/L	0.010	26	5156	5100	2
	V-1	51	-0.000	ug/L	0.001	19207	130	117	9
	Cr	52	0.125	ug/L	0.026	20	15247	15083	2
	Cr	53	0.005	ug/L	0.006	121	115	110	8
	Mn	55	0.011	ug/L	0.005	47	250	396	18
	Co	59	0.002	ug/L	0.001	46	40	60	17
>	Ge	72		ug/L			457613	436976 ✓	1
	Ni	60	-0.001	ug/L	0.001	119	22	19	12
	Ni	62	0.061	ug/L	0 032	52	29	51	22
	Cu	63	0.005	ug/L	0.002	42	58	83	14
	Cu	65	0.003	ug/L	0.001	34	28	34	8
	Zn	66	-0.007	ug/L	0.012	184	143	126	16
	Zn	67	0.015	ug/L	0.024	164	23	26	22
	Zn	68	0.007	ug/L	0 003	41	137	138	3
	As	75	0.004	ug/L	0.004	93	267	261	3
	As-1	75	0.511	ug/L	0.067	13	8149	8534	1
	Se	82	0.027	ug/L	0.020	74	-5	0	408
	Se	78	1.836	ug/L	0.246	13	8278	8652	1
	Mo	98	0.006	ug/L	0.001	22	17	43	14
	Y	89		ug/L			298590	275379	1
	Kr	83		ug/L			554	518	1
>	In	115		ug/L			979916	872475 ✓	1
	Ag	107	0.001	ug/L	0.000	24	15	27	11
	Cd	111	0.003	ug/L	0.001	34	63	69	5
	Cd	114	0.001	ug/L	0.001	105	30	39	34
	Sb	121	0.053	ug/L	0.002	4	102	807	5
	Sb	123	0.054	ug/L	0.002	4	72	618	5
	Ba	135	0.003	ug/L	0.002	62	11	22	32
	Ba	137	0.003	ug/L	0.000	13	17	37	6
>	Tb	159		ug/L			1160798	958815 ✓	0
	Tl	205	0.010	ug/L	0.004	43	51	316	38
	Pb	208	0.002	ug/L	0.001	33	139	189	12
	Bi	209		ug/L			2367270	2055581	0
	Th	232	0.093	ug/L	0.005	5	21	3244	4
	U	238	0.001	ug/L	0.000	26	3	53	23

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
ZZ		ZZZZZZ			Sc high
		ICSAB			^{62}Ni high
		LR200			Ag, Mo high
		LR300			
		B1			
		B2			
		ICSA			
		B3			
		CCV2			Mo, Ag high
		CCB2			
		VR32 MB1	SWN	20	Be
		↓ MB1SPK	↓	↓ ✓	↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 2 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 E	SWN	20	Be
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV3			
		CCB3			
		VR32 A-L	SWN	100	Be rr Ag
		A		20	
		ADUP		↓	
		ASPK		↓	
		B			
		C			
		D			
		E		100	V, Cr, Co
		F		20	Be; rr Ag
		G		↓	↓ ↓
		CCV4			
		CCB4			
		VR33 MB1	SWN	20	Be; rr Ag
		↓ MB1SPK	↓	↓	↓ ↓

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, November 16, 2012 11:38:53
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.1285
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3189.9	3189.877	19.383	0.6	Standard
	Mg	24.0	31573.0	31573.041	443.254	1.4	Standard
	In	114.9	68795.9	68795.880	429.402	0.6	Standard
	Pb	208.0	30196.8	30196.814	219.529	0.7	Standard
	U	238.1	53059.5	53059.527	481.866	0.9	Standard
⌈	CeO	155.9	1437.3	0.021	0.000	2.3	Standard
| >	Ce	139.9	69221.8	69221.779	197.514	0.3	Standard
⌊	Ce++	70.0	733.0	0.011	0.000	1.4	Standard
	Bkgd	220.0	0.2	0.167	0.118	70.7	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

:imization Summary

ırtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

ırt Time: 11/16/2012 11:38:51 AM
l Time: 11/16/2012 11:41:27 AM

ly Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3189.88
Obtained Intensity (Mg 23.985): 31573.04
Obtained Intensity (In 114.904): 68795.88
Obtained Intensity (Pb 207.977): 30196.81
Obtained Intensity (U 238.05): 53059.53
Obtained Intensity (Bkgd 220): 0.17
Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1437.32 / 69221.78)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=733.03 / 69221.78)

SmartTune Wizard - Summary

:imization Summary

irtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

irt Time: 11/16/2012 11:00:20 AM
l Time: 11/16/2012 11:03:02 AM

;s Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.711)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.702)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 11/16/2012 11:04:18 AM
d Time: 11/16/2012 11:08:29 AM

toLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.999; Intercept = -10.68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:45:47
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L				681751	0
	Be	9		ug/L				8	24
	C	13		ug/L				63994	1
	Cl	37		ug/L				3532807	0
>	Sc	45		ug/L				674505	2
	V	51		ug/L				6013	1
	V-1	51		ug/L				387	3
	Cr	52		ug/L				17778	2
	Cr	53		ug/L				210	7
	Mn	55		ug/L				314	2
	Co	59		ug/L				73	20
>	Ge	72		ug/L				426798	1
	Ni	60		ug/L				26	10
	Ni	62		ug/L				48	17
	Cu	63		ug/L				88	30
	Cu	65		ug/L				42	20
	Zn	66		ug/L				141	4
	Zn	67		ug/L				21	9
	Zn	68		ug/L				144	11
	As	75		ug/L				220	2
	As-1	75		ug/L				9153	0
	Se	82		ug/L				-1	888
	Se	78		ug/L				9315	0
	Mo	98		ug/L				35	11
	Y	89		ug/L				271155	0
	Kr	83		ug/L				529	5
>	In	115		ug/L				840042	0
	Ag	107		ug/L				32	23
	Cd	111		ug/L				72	14
	Cd	114		ug/L				44	20
	Sb	121		ug/L				346	17
	Sb	123		ug/L				257	13
	Ba	135		ug/L				17	24
	Ba	137		ug/L				19	9
>	Tb	159		ug/L				1001666	0
	Tl	205		ug/L				206	31
	Pb	208		ug/L				157	11
	Bi	209		ug/L				2293546	0
	Th	232		ug/L				1512	1
	U	238		ug/L				29	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:49:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	678848	1
	Be	9	0.200	ug/L	0.006	2	8	505	1
	C	13		ug/L			63994	65432	1
	Cl	37		ug/L			3532807	3545982	3
>	Sc	45		ug/L			674505	680274	0
	V	51	0.200	ug/L	0.021	10	6013	8785	3
	V-1	51	0.200	ug/L	0.003	1	387	3194	1
	Cr	52	0.500	ug/L	0.037	7	17778	23649	2
	Cr	53	0.500	ug/L	0.036	7	210	884	5
	Mn	55	0.500	ug/L	0.007	1	314	8394	1
	Co	59	0.200	ug/L	0.007	3	73	2642	3
>	Ge	72		ug/L			426798	428590	0
	Ni	60	0.500	ug/L	0.022	4	26	1458	3
	Ni	62	0.500	ug/L	0.050	9	48	231	7
	Cu	63	0.500	ug/L	0.013	2	88	3319	2
	Cu	65	0.500	ug/L	0.008	1	42	1474	1
	Zn	66	4.000	ug/L	0.038	0	141	6841	0
	Zn	67	4.000	ug/L	0.194	4	21	1040	4
	Zn	68	4.000	ug/L	0.111	2	144	4849	3
	As	75	0.200	ug/L	0.007	3	220	539	1
	As-1	75	0.200	ug/L	0.070	35	9153	9376	0
	Se	82	0.500	ug/L	0.010	2	-1	87	2
	Se	78	0.500	ug/L	0.258	51	9315	9443	0
	Mo	98	0.200	ug/L	0.015	7	35	777	7
	Y	89		ug/L			271155	271780	1
	Kr	83		ug/L			529	523	1
>	In	115		ug/L			840042	841036	0
	Ag	107	0.200	ug/L	0.006	3	32	2472	2
	Cd	111	0.100	ug/L	0.006	6	72	514	5
	Cd	114	0.100	ug/L	0.004	4	44	1157	3
	Sb	121	0.200	ug/L	0.004	1	346	2773	1
	Sb	123	0.200	ug/L	0.005	2	257	2116	1
	Ba	135	0.500	ug/L	0.016	3	17	1922	2
	Ba	137	0.500	ug/L	0.003	0	19	3256	0
>	Tb	159		ug/L			1001666	1004484	0
	Tl	205	0.200	ug/L	0.004	1	206	6732	1
	Pb	208	0.100	ug/L	0.002	1	157	4576	2
	Bi	209		ug/L			2293546	2285482	0
	Th	232	0.200	ug/L	0.007	3	1512	7425	3
	U	238	0.200	ug/L	0.000	0	29	8335	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:54:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690004	1
	Be	9	10.000	ug/L	0.218	2	8	24663	0
	C	13		ug/L			63994	64386	2
	Cl	37		ug/L			3532807	3627720	2
>	Sc	45		ug/L			674505	693621	0
	V	51	10.000	ug/L	0.128	1	6013	140550	1
	V-1	51	10.000	ug/L	0.110	1	387	135671	0
	Cr	52	10.000	ug/L	0.094	0	17778	136788	1
	Cr	53	10.000	ug/L	0.185	1	210	13896	1
	Mn	55	10.000	ug/L	0.186	1	314	164566	1
	Co	59	10.000	ug/L	0.235	2	73	126725	1
>	Ge	72		ug/L			426798	436937	1
	Ni	60	9.999	ug/L	0.243	2	26	27972	3
	Ni	62	10.001	ug/L	0.238	2	48	4001	1
	Cu	63	9.999	ug/L	0.076	0	88	63348	0
	Cu	65	9.999	ug/L	0.123	1	42	28630	0
	Zn	66	9.982	ug/L	0.152	1	141	17000	1
	Zn	67	10.082	ug/L	0.082	0	21	2783	0
	Zn	68	10.020	ug/L	0.111	1	144	12319	2
	As	75	10.000	ug/L	0.134	1	220	15204	0
	As-1	75	10.001	ug/L	0.223	2	9153	24303	0
	Se	82	9.997	ug/L	0.250	2	-1	1656	1
	Se	78	10.014	ug/L	0.607	6	9315	13704	0
	Mo	98	10.000	ug/L	0.111	1	35	38569	1
	Y	89		ug/L			271155	275843	1
	Kr	83		ug/L			529	544	4
>	In	115		ug/L			840042	854316	0
	Ag	107	10.000	ug/L	0.211	2	32	116515	1
	Cd	111	10.000	ug/L	0.116	1	72	44007	1
	Cd	114	10.000	ug/L	0.068	0	44	108341	0
	Sb	121	10.000	ug/L	0.047	0	346	131416	0
	Sb	123	10.000	ug/L	0.084	0	257	100706	0
	Ba	135	9.999	ug/L	0.076	0	17	37726	0
	Ba	137	10.000	ug/L	0.123	1	19	65463	1
>	Tb	159		ug/L			1001666	1032266	0
	Tl	205	10.000	ug/L	0.109	1	206	316714	1
	Pb	208	10.000	ug/L	0.053	0	157	416417	0
	Bi	209		ug/L			2293546	2310164	0
	Th	232	10.001	ug/L	0.104	1	1512	373350	0
	U	238	10.000	ug/L	0.196	1	29	410875	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:58:28
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			681751	698058	0
Be	9	19.939	ug/L	0.303	1	8	49153	1
C	13		ug/L			63994	63964	2
Cl	37		ug/L			3532807	3597639	2
> Sc	45		ug/L			674505	700457	1
V	51	20.040	ug/L	0.645	3	6013	280327	3
V-1	51	20.030	ug/L	0.714	3	387	275688	3
Cr	52	19.982	ug/L	0.255	1	17778	256694	1
Cr	53	19.952	ug/L	0.175	0	210	27523	0
Mn	55	19.941	ug/L	0.295	1	314	327267	2
Co	59	19.906	ug/L	0.351	1	73	250003	0
> Ge	72		ug/L			426798	434992	0
Ni	60	19.853	ug/L	0.104	0	26	53689	1
Ni	62	19.969	ug/L	0.298	1	48	7857	1
Cu	63	20.002	ug/L	0.387	1	88	126105	1
Cu	65	20.025	ug/L	0.383	1	42	57316	1
Zn	66	19.910	ug/L	0.244	1	141	33099	0
Zn	67	20.070	ug/L	0.530	2	21	5560	2
Zn	68	19.906	ug/L	0.272	1	144	23832	0
As	75	19.990	ug/L	0.017	0	220	29980	0
As-1	75	20.000	ug/L	0.021	0	9153	39065	0
Se	82	19.974	ug/L	0.346	1	-1	3279	1
Se	78	20.016	ug/L	0.207	1	9315	17816	0
Mo	98	20.020	ug/L	0 203	1	35	77142	0
Y	89		ug/L			271155	277399	0
Kr	83		ug/L			529	550	5
> In	115		ug/L			840042	848651	2
Ag	107	20.042	ug/L	0.625	3	32	233848	2
Cd	111	19.950	ug/L	0.396	1	72	86245	0
Cd	114	19.942	ug/L	0.353	1	44	212106	1
Sb	121	20.006	ug/L	0.450	2	346	261036	0
Sb	123	19.982	ug/L	0.463	2	257	198873	0
Ba	135	20.031	ug/L	0.302	1	17	75514	0
Ba	137	20.028	ug/L	0.375	1	19	130917	0
> Tb	159		ug/L			1001666	1019517	1
Tl	205	20.014	ug/L	0.262	1	206	627640	1
Pb	208	19.999	ug/L	0.296	1	157	822129	0
Bi	209		ug/L			2293546	2269096	0
Th	232	20.089	ug/L	0.319	1	1512	752562	0
U	238	19.998	ug/L	0.323	1	29	811192	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:03:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	689998	1
	Be	9	49.998	ug/L	0.961	1	8	121778	1
	C	13		ug/L			63994	64041	1
	Cl	37		ug/L			3532807	3745894	1
>	Sc	45		ug/L			674505	693960	0
	V	51	49.986	ug/L	1.203	2	6013	682651	2
	V-1	51	49.965	ug/L	0.712	1	387	678427	1
	Cr	52	49.987	ug/L	0.103	0	17778	608024	0
	Cr	53	49.919	ug/L	1.695	3	210	67355	3
	Mn	55	50.101	ug/L	1.217	2	314	822363	2
	Co	59	50.046	ug/L	0.343	0	73	625531	0
>	Ge	72		ug/L			426798	430617	0
	Ni	60	50.060	ug/L	2.045	4	26	134751	3
	Ni	62	49.968	ug/L	0.902	1	48	19326	1
	Cu	63	49.841	ug/L	0.494	0	88	306080	0
	Cu	65	49.832	ug/L	1.118	2	42	138811	2
	Zn	66	49.889	ug/L	0.959	1	141	81025	1
	Zn	67	49.847	ug/L	0.368	0	21	13442	0
	Zn	68	49.849	ug/L	1.244	2	144	58013	2
	As	75	49.977	ug/L	0.844	1	220	73688	1
	As-1	75	49.982	ug/L	0.781	1	9153	82661	1
	Se	82	49.897	ug/L	0.564	1	-1	8029	0
	Se	78	49.914	ug/L	0.641	1	9315	29769	0
	Mo	98	49.990	ug/L	0.682	1	35	190442	0
	Y	89		ug/L			271155	273448	1
	Kr	83		ug/L			529	549	7
>	In	115		ug/L			840042	823819	0
	Ag	107	49.775	ug/L	1.011	2	32	551472	1
	Cd	111	50.015	ug/L	0.224	0	72	210156	0
	Cd	114	50.070	ug/L	0.284	0	44	520620	0
	Sb	121	50.143	ug/L	0.183	0	346	643993	0
	Sb	123	50.076	ug/L	0.188	0	257	487265	0
	Ba	135	50.167	ug/L	0.125	0	17	186719	0
	Ba	137	50.132	ug/L	0.216	0	19	322401	0
>	Tb	159		ug/L			1001666	1004937	0
	Tl	205	49.952	ug/L	0.667	1	206	1536310	0
	Pb	208	49.980	ug/L	0.557	1	157	2021099	0
	Bi	209		ug/L			2293546	2197296	0
	Th	232	50.210	ug/L	0.647	1	1512	1891500	0
	U	238	50.469	ug/L	0.511	1	29	2117328	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:09:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	668251	1
	Be	9	99.918	ug/L	1.781	1	8	235086	2
	C	13		ug/L			63994	64099	3
	Cl	37		ug/L			3532807	3711465	0
>	Sc	45		ug/L			674505	677060	1
	V	51	100.456	ug/L	1.993	1	6013	1352528	0
	V-1	51	100.617	ug/L	1.806	1	387	1360181	0
	Cr	52	100.191	ug/L	2.506	2	17778	1178123	0
	Cr	53	100.716	ug/L	2.527	2	210	135575	1
	Mn	55	99.879	ug/L	1.927	1	314	1592528	0
	Co	59	100.079	ug/L	1.965	1	73	1223369	1
>	Ge	72		ug/L			426798	422829	2
	Ni	60	99.908	ug/L	3.597	3	26	263133	1
	Ni	62	99.696	ug/L	2.242	2	48	37425	0
	Cu	63	99.436	ug/L	4.016	4	88	588131	2
	Cu	65	99.133	ug/L	2.521	2	42	263400	0
	Zn	66	99.077	ug/L	4.016	4	141	153081	1
	Zn	67	99.572	ug/L	1.823	1	21	25975	2
	Zn	68	99.395	ug/L	4.037	4	144	111148	1
	As	75	99.721	ug/L	3.049	3	220	142770	0
	As-1	75	99.837	ug/L	3.004	3	9153	152243	0
	Se	82	99.780	ug/L	3.025	3	-1	15647	1
	Se	78	100.209	ug/L	2.886	2	9315	49652	1
	Mo	98	99.944	ug/L	2.718	2	35	372988	0
	Y	89		ug/L			271155	272249	0
	Kr	83		ug/L			529	597	2
>	In	115		ug/L			840042	814550	0
	Ag	107	99.079	ug/L	3.173	3	32	1053014	3
	Cd	111	99.293	ug/L	0.142	0	72	402968	0
	Cd	114	99.414	ug/L	1.144	1	44	1002463	1
	Sb	121	99.528	ug/L	0.112	0	346	1243952	0
	Sb	123	99.597	ug/L	0.827	0	257	945268	0
	Ba	135	99.865	ug/L	1.141	1	17	365838	1
	Ba	137	99.897	ug/L	0.104	0	19	633031	0
>	Tb	159		ug/L			1001666	996124	0
	Tl	205	100.694	ug/L	0.444	0	206	3142546	0
	Pb	208	99.851	ug/L	0.952	0	157	3982796	1
	Bi	209		ug/L			2293546	2133650	0
	Th	232	100.783	ug/L	0.381	0	1512	3862786	0
	U	238	99.667	ug/L	0.511	0	29	4099300	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:16:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662492	2
	Be	9	0.005	ug/L	0.005	118	8	19	64
	C	13		ug/L			63994	63519	1
	Cl	37		ug/L			3532807	3610386	2
>	Sc	45		ug/L			674505	676674	0
	V	51	0.019	ug/L	0.017	87	6013	6286	4
	V-1	51	-0.012	ug/L	0.010	79	387	228	57
	Cr	52	0.057	ug/L	0.043	75	17778	18493	3
	Cr	53	-0.043	ug/L	0.016	37	210	152	14
	Mn	55	0.005	ug/L	0.009	176	314	395	35
	Co	59	0.005	ug/L	0.006	127	73	129	55
>	Ge	72		ug/L			426798	420811	0
	Ni	60	0.004	ug/L	0.010	249	26	35	69
	Ni	62	0.144	ug/L	0.074	51	48	101	26
	Cu	63	0.013	ug/L	0.009	71	88	162	32
	Cu	65	0.001	ug/L	0.006	755	42	43	33
	Zn	66	-0.002	ug/L	0.008	465	141	137	8
	Zn	67	0.002	ug/L	0.005	196	21	21	5
	Zn	68	-0.007	ug/L	0.011	144	144	133	8
	As	75	0.006	ug/L	0.008	132	220	226	4
	As-1	75	0.101	ug/L	0.092	91	9153	9168	0
	Se	82	-0.096	ug/L	0.015	15	-1	-16	14
	Se	78	0.314	ug/L	0.339	107	9315	9310	0
	Mo	98	0.011	ug/L	0 002	18	35	76	9
	Y	89		ug/L			271155	269348	1
	Kr	83		ug/L			529	559	2
>	In	115		ug/L			840042	811042	0
	Ag	107	0.003	ug/L	0.001	19	32	63	10
	Cd	111	0.002	ug/L	0.003	145	72	79	17
	Cd	114	0.000	ug/L	0.001	1167	44	44	27
	Sb	121	0.097	ug/L	0.014	14	346	1538	11
	Sb	123	0.096	ug/L	0.016	16	257	1150	12
	Ba	135	0.001	ug/L	0.000	29	17	21	7
	Ba	137	0.002	ug/L	0.001	28	19	31	12
>	Tb	159		ug/L			1001666	975555	0
	Tl	205	0.021	ug/L	0.014	64	206	855	50
	Pb	208	0.001	ug/L	0.000	52	157	178	7
	Bi	209		ug/L			2293546	2236453	0
	Th	232	0.141	ug/L	0.008	5	1512	6770	3
	U	238	0.003	ug/L	0.001	20	29	135	16

Sample Information

Sample Date/Time: Friday, November 16, 2012 15:16:05
Method File: C:\NexIONData\Method\200.8nomin.mth
Mass Calibration File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**0.9999**	0.020	0.20	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.024	0.50	10	20	50	100
Co	59	**1.0000**	0.018	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9998**	0.013	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.038	0.20	10	20	50	100
U	238	**0.9999**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:22:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690403	1
	Be	9	49.894	ug/L	0.683	1	8	121266	0
	C	13		ug/L			63994	67900	1
	Cl	37		ug/L			3532807	3629687	1
>	Sc	45		ug/L			674505	703247	3
	V	51	50.500	ug/L	1.863	3	6013	708946	0
	V-1	51	49.902	ug/L	1.813	3	387	700498	0
	Cr	52	50.060	ug/L	2.314	4	17778	620285	1
	Cr	53	48.148	ug/L	2.038	4	210	67390	1
	Mn	55	49.794	ug/L	1.291	2	314	824536	0
	Co	59	48.896	ug/L	2.188	4	73	620443	2
>	Ge	72		ug/L			426798	430337	2
	Ni	60	50.592	ug/L	1.016	2	26	135669	1
	Ni	62	51.298	ug/L	2.083	4	48	19620	2
	Cu	63	52.276	ug/L	1.815	3	88	314756	1
	Cu	65	51.776	ug/L	1.199	2	42	140046	0
	Zn	66	50.777	ug/L	1.532	3	141	79933	0
	Zn	67	50.427	ug/L	2.276	4	21	13396	4
	Zn	68	49.844	ug/L	1.986	3	144	56807	2
	As	75	50.549	ug/L	1.471	2	220	73772	1
	As-1	75	50.988	ug/L	1.471	2	9153	83651	0
	Se	82	78.668	ug/L	2.053	2	-1	12555	0
	Se	78	79.902	ug/L	2.563	3	9315	42195	0
	Mo	98	49.610	ug/L	1.562	3	35	188439	1
	Y	89		ug/L			271155	275646	0
	Kr	83		ug/L			529	583	3
>	In	115		ug/L			840042	834912	0
	Ag	107	51.441	ug/L	1.082	2	32	560341	1
	Cd	111	49.654	ug/L	0.553	1	72	206580	1
	Cd	114	49.377	ug/L	0.518	1	44	510376	1
	Sb	121	49.211	ug/L	0.599	1	346	630579	0
	Sb	123	48.980	ug/L	0.378	0	257	476612	0
	Ba	135	50.077	ug/L	0.916	1	17	188036	1
	Ba	137	50.168	ug/L	0.843	1	19	325859	1
>	Tb	159		ug/L			1001666	1011851	0
	Tl	205	49.611	ug/L	0.837	1	206	1572690	0
	Pb	208	50.170	ug/L	0.451	0	157	2032668	0
	Bi	209		ug/L			2293546	2203007	0
	Th	232	49.919	ug/L	0.372	0	1512	1944213	0
	U	238	52.546	ug/L	0.603	1	29	2195230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:29:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	684262	1
	Be	9	0.000	ug/L	0.002	1684	8	9	55
	C	13		ug/L			63994	62226	3
	Cl	37		ug/L			3532807	3528326	2
>	Sc	45		ug/L			674505	687249	1
	V	51	-0.005	ug/L	0.002	38	6013	6055	0
	V-1	51	-0.019	ug/L	0.001	5	387	139	9
	Cr	52	-0.022	ug/L	0.017	77	17778	17851	0
	Cr	53	-0.065	ug/L	0.016	24	210	125	16
	Mn	55	-0.001	ug/L	0.001	75	314	296	5
	Co	59	0.000	ug/L	0.000	161	73	76	5
>	Ge	72		ug/L			426798	425988	1
	Ni	60	-0.002	ug/L	0.003	129	26	20	32
	Ni	62	0.011	ug/L	0.031	285	48	52	22
	Cu	63	-0.000	ug/L	0.000	576	88	87	2
	Cu	65	-0.005	ug/L	0.002	50	42	29	20
	Zn	66	0.001	ug/L	0.002	149	141	143	2
	Zn	67	0.005	ug/L	0.003	58	21	22	2
	Zn	68	-0.019	ug/L	0.005	27	144	122	4
	As	75	0.034	ug/L	0.030	87	220	269	14
	As-1	75	0.066	ug/L	0.114	173	9153	9229	0
	Se	82	0.067	ug/L	0.096	142	-1	8	173
	Se	78	0.217	ug/L	0.404	185	9315	9384	0
	Mo	98	0.004	ug/L	0.003	84	35	49	21
	Y	89		ug/L			271155	270459	1
	Kr	83		ug/L			529	548	0
>	In	115		ug/L			840042	812126	0
	Ag	107	0.000	ug/L	0.001	11553	32	31	24
	Cd	111	0.001	ug/L	0.001	102	72	76	7
	Cd	114	0.000	ug/L	0.001	252	44	45	13
	Sb	121	0.019	ug/L	0.009	47	346	567	19
	Sb	123	0.019	ug/L	0.008	42	257	432	18
	Ba	135	-0.001	ug/L	0.002	189	17	13	42
	Ba	137	0.001	ug/L	0.001	151	19	23	32
>	Tb	159		ug/L			1001666	982567	0
	Tl	205	0.005	ug/L	0.005	112	206	346	47
	Pb	208	0.000	ug/L	0.000	193	157	159	4
	Bi	209		ug/L			2293546	2275284	0
	Th	232	0.066	ug/L	0.002	2	1512	3977	0
	U	238	0.001	ug/L	0.000	2	29	74	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:33:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683933	1
	Be	9	50.034	ug/L	0.841	1	8	120468	0
	C	13		ug/L			63994	66070	2
	Cl	37		ug/L			3532807	3775307	3
>	Sc	45		ug/L			674505	684426	1
	V	51	49.338	ug/L	1.329	2	6013	674609	1
	V-1	51	49.295	ug/L	1.561	3	387	673794	1
	Cr	52	49.891	ug/L	1.454	2	17778	602168	2
	Cr	53	49.736	ug/L	2.482	4	210	67784	4
	Mn	55	50.137	ug/L	1.332	2	314	808256	1
	Co	59	49.406	ug/L	0.759	1	73	610603	0
>	Ge	72		ug/L			426798	429799	2
	Ni	60	51.006	ug/L	0.994	1	26	136605	0
	Ni	62	50.622	ug/L	0.675	1	48	19349	3
	Cu	63	51.236	ug/L	1.610	3	88	308117	1
	Cu	65	51.013	ug/L	0.746	1	42	137848	2
	Zn	66	50.452	ug/L	1.096	2	141	79337	1
	Zn	67	50.153	ug/L	1.547	3	21	13305	1
	Zn	68	50.940	ug/L	1.570	3	144	58000	3
	As	75	50.901	ug/L	0.685	1	220	74206	0
	As-1	75	50.873	ug/L	0.866	1	9153	83393	0
	Se	82	50.956	ug/L	0.554	1	-1	8123	1
	Se	78	50.854	ug/L	1.354	2	9315	30234	0
	Mo	98	49.832	ug/L	1.144	2	35	189075	0
	Y	89		ug/L			271155	270557	1
	Kr	83		ug/L			529	565	2
>	In	115		ug/L			840042	822244	0
	Ag	107	48.502	ug/L	0.393	0	32	520362	0
	Cd	111	50.122	ug/L	0.655	1	72	205374	1
	Cd	114	50.866	ug/L	0.327	0	44	517780	0
	Sb	121	49.723	ug/L	0.297	0	346	627496	0
	Sb	123	50.142	ug/L	0.288	0	257	480514	0
	Ba	135	50.075	ug/L	0.722	1	17	185178	1
	Ba	137	49.887	ug/L	0.147	0	19	319117	0
>	Tb	159		ug/L			1001666	1007905	0
	Tl	205	48.340	ug/L	0.187	0	206	1526563	0
	Pb	208	49.413	ug/L	0.607	1	157	1994242	0
	Bi	209		ug/L			2293546	2190001	1
	Th	232	47.934	ug/L	0.611	1	1512	1859687	0
	U	238	48.673	ug/L	2.423	4	29	2025586	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:40:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	673285	2
	Be	9	0.001	ug/L	0.001	185	8	10	26
	C	13		ug/L			63994	63733	4
	Cl	37		ug/L			3532807	3619561	1
>	Sc	45		ug/L			674505	687411	1
	V	51	-0.024	ug/L	0.008	31	6013	5800	1
	V-1	51	-0.020	ug/L	0.000	2	387	127	5
	Cr	52	-0.078	ug/L	0.022	27	17778	17196	0
	Cr	53	-0.063	ug/L	0.007	10	210	128	7
	Mn	55	-0.001	ug/L	0.001	65	314	300	4
	Co	59	-0.000	ug/L	0.001	233	73	71	9
>	Ge	72		ug/L			426798	421158	0
	Ni	60	-0.002	ug/L	0.002	119	26	21	26
	Ni	62	0.032	ug/L	0.027	83	48	59	16
	Cu	63	-0.001	ug/L	0.002	172	88	81	11
	Cu	65	-0.005	ug/L	0.003	59	42	29	24
	Zn	66	-0.014	ug/L	0.002	12	141	119	2
	Zn	67	-0.010	ug/L	0.013	128	21	18	19
	Zn	68	-0.013	ug/L	0.007	54	144	128	5
	As	75	0.012	ug/L	0.010	81	220	234	5
	As-1	75	0.174	ug/L	0.094	54	9153	9280	1
	Se	82	-0.053	ug/L	0.063	120	-1	-10	98
	Se	78	0.598	ug/L	0.284	47	9315	9433	1
	Mo	98	0.008	ug/L	0.002	21	35	66	9
	Y	89		ug/L			271155	270665	0
	Kr	83		ug/L			529	561	3
>	In	115		ug/L			840042	820462	1
	Ag	107	0.000	ug/L	0.000	675	32	32	15
	Cd	111	0.001	ug/L	0.001	103	72	74	4
	Cd	114	-0.000	ug/L	0.001	124	44	38	15
	Sb	121	0.050	ug/L	0.007	13	346	964	9
	Sb	123	0.051	ug/L	0.011	22	257	734	14
	Ba	135	-0.002	ug/L	0.001	40	17	9	34
	Ba	137	0.001	ug/L	0.001	154	19	22	23
>	Tb	159		ug/L			1001666	981836	1
	Tl	205	0.008	ug/L	0.006	78	206	456	42
	Pb	208	0.000	ug/L	0.000	853	157	155	5
	Bi	209		ug/L			2293546	2243714	0
	Th	232	0.111	ug/L	0.011	9	1512	5693	8
	U	238	0.002	ug/L	0.000	17	29	89	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:44:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	700365	1
Be	9	0.200	ug/L	0.008	3	8	501	3
C	13		ug/L			63994	63447	4
Cl	37		ug/L			3532807	3523565	1
Sc	45		ug/L			674505	688392	0
V	51	0.194	ug/L	0.020	10	6013	8773	2
V-1	51	0.187	ug/L	0.009	4	387	2959	3
Cr	52	0.469	ug/L	0.021	4	17778	23665	0
Cr	53	0.439	ug/L	0.035	7	210	815	6
Mn	55	0.499	ug/L	0.014	2	314	8414	2
Co	59	0.200	ug/L	0.003	1	73	2555	1
Ge	72		ug/L			426798	429033	1
Ni	60	0.510	ug/L	0.011	2	26	1390	1
Ni	62	0.453	ug/L	0.069	15	48	221	12
Cu	63	0.528	ug/L	0.015	2	88	3258	3
Cu	65	0.532	ug/L	0.009	1	42	1476	2
Zn	66	4.322	ug/L	0.068	1	141	6915	0
Zn	67	3.960	ug/L	0.228	5	21	1068	5
Zn	68	4.216	ug/L	0.158	3	144	4923	1
As	75	0.225	ug/L	0.017	7	220	548	5
As-1	75	0.250	ug/L	0.055	22	9153	9564	0
Se	82	0.495	ug/L	0.048	9	-1	76	10
Se	78	0.600	ug/L	0.252	41	9315	9608	0
Mo	98	0.191	ug/L	0.004	2	35	757	0
Y	89		ug/L			271155	266536	0
Kr	83		ug/L			529	542	2
In	115		ug/L			840042	828114	1
Ag	107	0.203	ug/L	0.005	2	32	2226	3
Cd	111	0.099	ug/L	0.006	6	72	480	5
Cd	114	0.104	ug/L	0.002	1	44	1106	0
Sb	121	0.189	ug/L	0.004	1	346	2744	0
Sb	123	0.194	ug/L	0.001	0	257	2127	1
Ba	135	0.492	ug/L	0.006	1	17	1848	2
Ba	137	0.487	ug/L	0.005	1	19	3157	2
Tb	159		ug/L			1001666	982131	1
Tl	205	0.205	ug/L	0.007	3	206	6503	2
Pb	208	0.110	ug/L	0.002	1	157	4473	0
Bi	209		ug/L			2293546	2274129	0
Th	232	0.192	ug/L	0.002	0	1512	8735	1
U	238	0.195	ug/L	0.000	0	29	7949	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICSA~~ ZZZZZZ
Sample Dil Factor: 11.19.12 MJJ
Comments:
Sample Date/Time: Friday, November 16, 2012 15:48:46
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			681751	709155	3
Be	9	0.007	ug/L	0.002	38	8	25	25
C	13		ug/L			63994	135711	1
Cl	37		ug/L			3532807	10547836	1
> Sc	45		ug/L			674505	851406	2
V	51	0.142	ug/L	0.020	13	6013	9994	6
V-1	51	1.444	ug/L	0.005	0	387	25034	2
Cr	52	0.497	ug/L	0.032	6	17778	29679	1
Cr	53	4.674	ug/L	0.093	1	210	8163	0
Mn	55	0.064	ug/L	0.001	1	314	1683	2
Co	59	0.025	ug/L	0.003	10	73	468	6
> Ge	72		ug/L			426798	461713	1
Ni	60	0.414	ug/L	0.010	2	26	1219	0
Ni	62	4.588	ug/L	1.156	25	48	1934	25
Cu	63	1.210	ug/L	0.101	8	88	7916	9
Cu	65	0.430	ug/L	0.005	1	42	1292	1
Zn	66	1.949	ug/L	0.016	0	141	3440	1
Zn	67	7.846	ug/L	0.134	1	21	2255	0
Zn	68	1.394	ug/L	0.064	4	144	1857	6
As	75	0.063	ug/L	0.057	90	220	337	26
As-1	75	0.467	ug/L	0.102	21	9153	10631	1
Se	82	-0.333	ug/L	0.048	14	-1	-59	16
Se	78	1.587	ug/L	0.552	34	9315	10775	1
Mo	98	418.068	ug/L	8.534	2	35	1704184	2
Y	89		ug/L			271155	295068	2
Kr	83		ug/L			529	842	2
> In	115		ug/L			840042	868906	2
Ag	107	0.026	ug/L	0.002	7	32	330	8
Cd	111	0.128	ug/L	0.010	7	72	630	7
Cd	114	0.278	ug/L	0.011	3	44	3030	1
Sb	121	0.074	ug/L	0.004	4	346	1344	5
Sb	123	0.072	ug/L	0.002	2	257	999	1
Ba	135	0.060	ug/L	0.004	7	17	251	5
Ba	137	0.050	ug/L	0.004	7	19	359	8
> Tb	159		ug/L			1001666	1055807	1
Tl	205	0.042	ug/L	0.004	10	206	1614	9
Pb	208	0.040	ug/L	0.001	3	157	1847	2
Bi	209		ug/L			2293546	2177162	0
Th	232	0.216	ug/L	0.103	47	1512	10361	39
U	238	0.017	ug/L	0.001	4	29	778	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:55:18
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	651822	1
	Be	9	0.003	ug/L	0.002	48	8	15	20
	C	13		ug/L			63994	118709	0
	Cl	37		ug/L			3532807	9688038	3
>	Sc	45		ug/L			674505	684435	1
	V	51	0.098	ug/L	0.083	85	6013	7436	16
	V-1	51	1.418	ug/L	0.010	0	387	19773	1
	Cr	52	19.960	ug/L	0.107	0	17778	251769	1
	Cr	53	23.684	ug/L	0.311	1	210	32395	0
	Mn	55	19.365	ug/L	0.345	1	314	312395	0
	Co	59	18.880	ug/L	0.957	5	73	233300	3
>	Ge	72		ug/L			426798	405255	0
	Ni	60	20.012	ug/L	0.087	0	26	50564	0
	Ni	62	25.037	ug/L	1.339	5	48	9046	5
	Cu	63	20.880	ug/L	0.539	2	88	118492	2
	Cu	65	20.147	ug/L	0.121	0	42	51360	0
	Zn	66	19.841	ug/L	0.166	0	141	29507	0
	Zn	67	23.388	ug/L	0.399	1	21	5864	2
	Zn	68	18.588	ug/L	0.346	1	144	20044	1
	As	75	19.700	ug/L	0.319	1	220	27211	1
	As-1	75	20.002	ug/L	0.388	1	9153	36194	0
	Se	82	-0.434	ug/L	0.074	17	-1	-67	16
	Se	78	1.441	ug/L	0.255	17	9315	9402	0
	Mo	98	461.443	ug/L	2.033	0	35	1651065	0
	Y	89		ug/L			271155	268170	1
	Kr	83		ug/L			529	784	4
>	In	115		ug/L			840042	833177	1
	Ag	107	22.006	ug/L	0.580	2	32	239296	3
	Cd	111	19.695	ug/L	0.375	1	72	81799	0
	Cd	114	19.834	ug/L	0.482	2	44	204564	1
	Sb	121	0.049	ug/L	0.001	2	346	969	2
	Sb	123	0.053	ug/L	0.001	2	257	770	2
	Ba	135	0.052	ug/L	0.003	5	17	211	4
	Ba	137	0.039	ug/L	0.002	5	19	272	4
>	Tb	159		ug/L			1001666	1019512	0
	Tl	205	0.028	ug/L	0.001	4	206	1098	2
	Pb	208	0.037	ug/L	0.001	1	157	1674	1
	Bi	209		ug/L			2293546	2067717	3
	Th	232	0.039	ug/L	0.012	30	1512	3063	14
	U	238	-0.000	ug/L	0.000	251	29	26	34

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:02:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	643805	1
	Be	9	193.894	ug/L	4.482	2	8	439477	2
	C	13		ug/L			63994	64423	1
	Cl	37		ug/L			3532807	3718487	1
>	Sc	45		ug/L			674505	662247	1
	V	51	196.000	ug/L	1.534	0	6013	2575959	0
	V-1	51	193.120	ug/L	1.216	0	387	2553621	0
	Cr	52	194.948	ug/L	3.500	1	17778	2226056	0
	Cr	53	185.716	ug/L	2.916	1	210	244400	1
	Mn	55	190.415	ug/L	4.718	2	314	2969492	1
	Co	59	194.981	ug/L	3.209	1	73	2331691	1
>	Ge	72		ug/L			426798	388495	0
	Ni	60	198.627	ug/L	1.536	0	26	480895	0
	Ni	62	201.017	ug/L	2.367	1	48	69315	1
	Cu	63	198.612	ug/L	4.528	2	88	1079776	1
	Cu	65	201.635	ug/L	2.872	1	42	492433	1
	Zn	66	196.294	ug/L	3.256	1	141	278712	1
	Zn	67	196.592	ug/L	0.961	0	21	47106	1
	Zn	68	195.505	ug/L	3.953	2	144	200868	1
	As	75	204.100	ug/L	1.745	0	220	268392	0
	As-1	75	202.150	ug/L	1.334	0	9153	274813	0
	Se	82	202.844	ug/L	2.766	1	-1	29239	0
	Se	78	196.236	ug/L	3.291	1	9315	81240	1
	Mo	98	233.412	ug/L	4.275	1	35	800579	1
	Y	89		ug/L			271155	256233	1
	Kr	83		ug/L			529	733	3
>	In	115		ug/L			840042	799590	1
	Ag	107	224.823	ug/L	2.878	1	32	2345216	0
	Cd	111	198.829	ug/L	2.951	1	72	791957	1
	Cd	114	197.765	ug/L	2.156	1	44	1957303	0
	Sb	121	208.240	ug/L	5.536	2	346	2553825	1
	Sb	123	203.263	ug/L	3.448	1	257	1893203	1
	Ba	135	201.609	ug/L	3.063	1	17	724908	1
	Ba	137	204.341	ug/L	3.038	1	19	1270873	0
>	Tb	159		ug/L			1001666	987852	0
	Tl	205	198.892	ug/L	1.163	0	206	6155371	0
	Pb	208	197.398	ug/L	1.403	0	157	7807810	0
	Bi	209		ug/L			2293546	1922412	0
	Th	232	198.818	ug/L	0.973	0	1512	7555419	0
	U	238	196.618	ug/L	1.482	0	29	8019500	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:09:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	625649	1
	Be	9	292.016	ug/L	6.005	2	8	643146	1
	C	13		ug/L			63994	66112	0
	Cl	37		ug/L			3532807	3720039	0
>	Sc	45		ug/L			674505	631164	0
	V	51	306.509	ug/L	4.669	1	6013	3835950	0
	V-1	51	303.265	ug/L	5.141	1	387	3821385	0
	Cr	52	304.815	ug/L	2.717	0	17778	3308106	0
	Cr	53	294.426	ug/L	3.566	1	210	369158	0
	Mn	55	301.532	ug/L	4.866	1	314	4481781	0
	Co	59	302.091	ug/L	2.656	0	73	3442831	0
>	Ge	72		ug/L			426798	382426	0
	Ni	60	296.776	ug/L	1.325	0	26	707324	1
	Ni	62	304.019	ug/L	1.773	0	48	103168	0
	Cu	63	290.623	ug/L	5.679	1	88	1555269	1
	Cu	65	294.523	ug/L	1.468	0	42	707976	0
	Zn	66	282.879	ug/L	3.139	1	141	395309	0
	Zn	67	287.842	ug/L	0.602	0	21	67884	0
	Zn	68	278.979	ug/L	4.208	1	144	282121	2
	As	75	301.941	ug/L	4.616	1	220	390744	1
	As-1	75	302.646	ug/L	4.440	1	9153	400915	0
	Se	82	286.664	ug/L	3.783	1	-1	40678	1
	Se	78	289.679	ug/L	3.601	1	9315	114077	1
	Mo	98	328.562	ug/L	7.014	2	35	1109383	2
	Y	89		ug/L			271155	244846	1
	Kr	83		ug/L			529	796	3
>	In	115		ug/L			840042	776169	0
	Ag	107	308.042	ug/L	6.252	2	32	3119645	2
	Cd	111	290.846	ug/L	2.150	0	72	1124602	0
	Cd	114	305.321	ug/L	1.910	0	44	2933622	0
	Sb	121	306.155	ug/L	4.675	1	346	3645530	1
	Sb	123	306.094	ug/L	3.686	1	257	2767812	1
	Ba	135	305.088	ug/L	3.069	1	17	1064971	1
	Ba	137	309.899	ug/L	2.187	0	19	1871209	0
>	Tb	159		ug/L			1001666	962277	0
	Tl	205	296.494	ug/L	0.086	0	206	8938433	0
	Pb	208	298.811	ug/L	1.586	0	157	11513336	0
	Bi	209		ug/L			2293546	1836063	0
	Th	232	302.204	ug/L	4.714	1	1512	11185862	1
	U	238	295.238	ug/L	4.680	1	29	11729888	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:15:52
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	660964	2
	Be	9	0.007	ug/L	0.007	108	8	24	68
	C	13		ug/L			63994	62290	1
	Cl	37		ug/L			3532807	3575475	2
>	Sc	45		ug/L			674505	648232	1
	V	51	-0.002	ug/L	0.010	469	6013	5749	1
	V-1	51	0.004	ug/L	0.007	163	387	424	18
	Cr	52	-0.014	ug/L	0.021	149	17778	16928	0
	Cr	53	0.007	ug/L	0.031	468	210	210	17
	Mn	55	0.012	ug/L	0.004	31	314	487	10
	Co	59	0.003	ug/L	0.003	124	73	102	38
>	Ge	72		ug/L			426798	414211	2
	Ni	60	0.038	ug/L	0.003	7	26	123	5
	Ni	62	1.539	ug/L	0.447	29	48	610	24
	Cu	63	0.120	ug/L	0.041	34	88	779	28
	Cu	65	0.015	ug/L	0.006	39	42	78	18
	Zn	66	0.814	ug/L	0.008	0	141	1369	1
	Zn	67	0.686	ug/L	0.053	7	21	195	5
	Zn	68	0.758	ug/L	0.021	2	144	969	3
	As	75	0.016	ug/L	0.008	52	220	235	3
	As-1	75	0.130	ug/L	0.150	115	9153	9062	0
	Se	82	-0.080	ug/L	0.063	78	-1	-14	67
	Se	78	0.391	ug/L	0.532	136	9315	9192	0
	Mo	98	0.042	ug/L	0.007	17	35	187	14
	Y	89		ug/L			271155	266145	0
	Kr	83		ug/L			529	546	2
>	In	115		ug/L			840042	816768	0
	Ag	107	0.008	ug/L	0.004	46	32	117	34
	Cd	111	0.013	ug/L	0.017	127	72	125	55
	Cd	114	0.014	ug/L	0.021	154	44	184	117
	Sb	121	0.291	ug/L	0.013	4	346	3977	4
	Sb	123	0.295	ug/L	0.003	1	257	3061	1
	Ba	135	0.014	ug/L	0.015	105	17	67	79
	Ba	137	0.015	ug/L	0.013	87	19	116	73
>	Tb	159		ug/L			1001666	983468	0
	Tl	205	0.044	ug/L	0.012	26	206	1558	24
	Pb	208	0.013	ug/L	0.009	72	157	659	55
	Bi	209		ug/L			2293546	2240936	1
	Th	232	0.174	ug/L	0.021	12	1512	8052	9
	U	238	0.009	ug/L	0.006	67	29	373	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:21:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	679448	1
	Be	9	0.006	ug/L	0.007	120	8	22	74
	C	13		ug/L			63994	63657	1
	Cl	37		ug/L			3532807	3565042	4
>	Sc	45		ug/L			674505	659410	1
	V	51	-0.009	ug/L	0.016	186	6013	5763	4
	V-1	51	0.003	ug/L	0.017	603	387	417	54
	Cr	52	-0.045	ug/L	0.039	85	17778	16862	1
	Cr	53	-0.007	ug/L	0.010	142	210	196	8
	Mn	55	0.017	ug/L	0.016	96	314	571	45
	Co	59	0.008	ug/L	0.013	153	73	172	90
>	Ge	72		ug/L			426798	413152	1
	Ni	60	0.028	ug/L	0.019	69	26	96	52
	Ni	62	0.260	ug/L	0.042	16	48	142	11
	Cu	63	0.031	ug/L	0.012	38	88	266	26
	Cu	65	0.011	ug/L	0.010	91	42	70	39
	Zn	66	0.430	ug/L	0.031	7	141	786	6
	Zn	67	0.407	ug/L	0.024	5	21	124	5
	Zn	68	0.451	ug/L	0.027	5	144	631	3
	As	75	0.013	ug/L	0.030	233	220	232	19
	As-1	75	0.120	ug/L	0.088	72	9153	9028	1
	Se	82	-0.007	ug/L	0.043	640	-1	-2	234
	Se	78	0.404	ug/L	0.340	84	9315	9176	1
	Mo	98	0.009	ug/L	0.003	30	35	69	14
	Y	89		ug/L			271155	257050	1
	Kr	83		ug/L			529	527	4
>	In	115		ug/L			840042	825856	0
	Ag	107	0.002	ug/L	0.001	51	32	51	19
	Cd	111	0.006	ug/L	0.000	7	72	96	1
	Cd	114	0.002	ug/L	0.002	108	44	61	30
	Sb	121	0.066	ug/L	0.011	16	346	1175	11
	Sb	123	0.067	ug/L	0.011	16	257	899	11
	Ba	135	0.008	ug/L	0.002	20	17	47	13
	Ba	137	0.009	ug/L	0.003	35	19	78	26
>	Tb	159		ug/L			1001666	981711	1
	Tl	205	0.021	ug/L	0.014	64	206	850	47
	Pb	208	0.005	ug/L	0.001	9	157	366	6
	Bi	209		ug/L			2293546	2260079	0
	Th	232	0.030	ug/L	0.003	10	1512	2612	4
	U	238	0.002	ug/L	0.001	47	29	95	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:27:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			681751	648610	0
	Be	9	0.007	ug/L	0.002	32	8	25	22
	C	13		ug/L			63994	114971	1
	Cl	37		ug/L			3532807	9219316	0
>	Sc	45		ug/L			674505	665881	2
	V	51	0.105	ug/L	0.034	32	6013	7314	6
	V-1	51	1.430	ug/L	0.046	3	387	19385	1
	Cr	52	0.534	ug/L	0.023	4	17778	23636	1
	Cr	53	4.785	ug/L	0.109	2	210	6531	0
	Mn	55	0.066	ug/L	0.001	2	314	1341	0
	Co	59	0.024	ug/L	0.000	2	73	359	3
>	Ge	72		ug/L			426798	398034	1
	Ni	60	0.383	ug/L	0.031	7	26	974	8
	Ni	62	4.605	ug/L	0.837	18	48	1669	17
	Cu	63	1.155	ug/L	0.082	7	88	6513	5
	Cu	65	0.425	ug/L	0.015	3	42	1101	3
	Zn	66	1.677	ug/L	0.067	3	141	2569	2
	Zn	67	7.418	ug/L	0.113	1	21	1839	0
	Zn	68	1.069	ug/L	0 017	1	144	1258	3
	As	75	0.112	ug/L	0.057	50	220	356	22
	As-1	75	0.473	ug/L	0.020	4	9153	9174	1
	Se	82	-0.419	ug/L	0.080	19	-1	-63	17
	Se	78	1.478	ug/L	0.287	19	9315	9248	1
	Mo	98	449.119 ✓	ug/L	10.973	2	35	1578060	1
	Y	89		ug/L			271155	263434	0
	Kr	83		ug/L			529	786	5
>	In	115		ug/L			840042	822154	1
	Ag	107	0.030	ug/L	0.002	7	32	354	6
	Cd	111	0.113	ug/L	0.008	6	72	532	4
	Cd	114	0.272	ug/L	0.011	3	44	2813	2
	Sb	121	0.108	ug/L	0.008	7	346	1697	7
	Sb	123	0.108	ug/L	0.004	3	257	1285	3
	Ba	135	0.057	ug/L	0.003	4	17	226	3
	Ba	137	0.050	ug/L	0.002	3	19	337	4
>	Tb	159		ug/L			1001666	1001600	0
	Tl	205	0.047	ug/L	0.005	9	206	1687	8
	Pb	208	0.039	ug/L	0.001	2	157	1741	2
	Bi	209		ug/L			2293546	1966403	1
	Th	232	0.211	ug/L	0.111	52	1512	9656	44
	U	238	0.017	ug/L	0.000	1	29	723	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:32:59
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	635191	1
	Be	9	0.001	ug/L	0.002	175	8	10	39
	C	13		ug/L			63994	61914	4
	Cl	37		ug/L			3532807	3591312	4
>	Sc	45		ug/L			674505	640852	0
	V	51	-0.004	ug/L	0.005	106	6013	5657	1
	V-1	51	0.078	ug/L	0.017	21	387	1372	15
	Cr	52	-0.038	ug/L	0.011	27	17778	16471	1
	Cr	53	0.229	ug/L	0.055	23	210	491	14
	Mn	55	0.009	ug/L	0.000	3	314	439	1
	Co	59	-0.000	ug/L	0.001	435	73	66	17
>	Ge	72		ug/L			426798	393570	0
	Ni	60	0.049	ug/L	0.002	4	26	143	4
	Ni	62	0.245	ug/L	0.078	31	48	130	20
	Cu	63	0.033	ug/L	0.005	14	88	261	10
	Cu	65	0.014	ug/L	0.005	31	42	74	15
	Zn	66	0.943	ug/L	0.050	5	141	1485	4
	Zn	67	0.841	ug/L	0.009	1	21	223	0
	Zn	68	0.888	ug/L	0.042	4	144	1056	3
	As	75	0.038	ug/L	0.022	57	220	254	12
	As-1	75	0.183	ug/L	0.042	22	9153	8684	0
	Se	82	-0.029	ug/L	0 049	168	-1	-5	120
	Se	78	0.599	ug/L	0.213	35	9315	8815	0
	Mo	98	0.074	ug/L	0.012	16	35	291	14
	Y	89		ug/L			271155	258714	2
	Kr	83		ug/L			529	541	1
>	In	115		ug/L			840042	822509	0
	Ag	107	0.000	ug/L	0.000	197	32	34	14
	Cd	111	0.004	ug/L	0.003	61	72	88	12
	Cd	114	0.000	ug/L	0.001	825	44	45	23
	Sb	121	0.008	ug/L	0.006	80	346	436	17
	Sb	123	0.008	ug/L	0.004	46	257	329	10
	Ba	135	0.006	ug/L	0.002	35	17	40	20
	Ba	137	0.008	ug/L	0.001	7	19	68	5
>	Tb	159		ug/L			1001666	992149	2
	Tl	205	0.000	ug/L	0.000	168	206	213	5
	Pb	208	0.008	ug/L	0.001	9	157	467	4
	Bi	209		ug/L			2293546	2287878	0
	Th	232	-0.029	ug/L	0.001	3	1512	407	10
	U	238	-0.000	ug/L	0.000	87	29	22	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:37:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	657826 ✓	0
	Be	9	50.406	ug/L	1.336	2	8	116738	2
	C	13		ug/L			63994	62859	0
	Cl	37		ug/L			3532807	3670750	0
>	Sc	45		ug/L			674505	649136 ✓	1
	V	51	49.115	ug/L	0.079	0	6013	637090	1
	V-1	51	49.194	ug/L	0.317	0	387	637851	1
	Cr	52	48.659	ug/L	0.508	1	17778	557451	0
	Cr	53	48.923	ug/L	1.476	3	210	63235	1
	Mn	55	49.341	ug/L	1.593	3	314	754271	1
	Co	59	50.377	ug/L	1.722	3	73	590321	1
>	Ge	72		ug/L			426798	405628 ✓	0
	Ni	60	49.121	ug/L	0.511	1	26	124195	1
	Ni	62	51.130	ug/L	0.944	1	48	18442	1
	Cu	63	49.726	ug/L	0.664	1	88	282360	1
	Cu	65	51.431	ug/L	0.410	0	42	131164	0
	Zn	66	50.272	ug/L	0.766	1	141	74628	1
	Zn	67	50.444	ug/L	1.075	2	21	12634	2
	Zn	68	50.640	ug/L	1.295	2	144	54427	2
	As	75	50.678	ug/L	0.364	0	220	69740	0
	As-1	75	50.051	ug/L	0.308	0	9153	77589	0
	Se	82	52.605	ug/L	0.466	0	-1	7916	0
	Se	78	50.390	ug/L	0.456	0	9315	28361	0
	Mo	98	55.258	ug/L	0.522	0	35	197924	0
	Y	89		ug/L			271155	261496	1
	Kr	83		ug/L			529	549	4
>	In	115		ug/L			840042	822790 ✓	0
	Ag	107	55.340	ug/L	0.802	1	32	594147	1
	Cd	111	50.572	ug/L	0.608	1	72	207344	0
	Cd	114	50.658	ug/L	0.600	1	44	516035	1
	Sb	121	50.599	ug/L	0.546	1	346	638961	0
	Sb	123	50.378	ug/L	0.719	1	257	483083	1
	Ba	135	49.846	ug/L	0.139	0	17	184458	0
	Ba	137	49.733	ug/L	0.903	1	19	318365	2
>	Tb	159		ug/L			1001666	1005462 ✓	1
	Tl	205	48.466	ug/L	0.474	0	206	1526739	0
	Pb	208	49.781	ug/L	0.322	0	157	2004186	0
	Bi	209		ug/L			2293546	2225104	0
	Th	232	47.939	ug/L	0.887	1	1512	1855266	1
	U	238	48.978	ug/L	1.646	3	29	2033809	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:44:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	650878	3
	Be	9	0.004	ug/L	0.002	44	8	16	19
	C	13		ug/L			63994	63249	2
	Cl	37		ug/L			3532807	3537997	2
>	Sc	45		ug/L			674505	640016	1
	V	51	-0.015	ug/L	0.003	18	6013	5518	1
	V-1	51	0.007	ug/L	0.001	13	387	461	2
	Cr	52	-0.048	ug/L	0.030	62	17778	16346	1
	Cr	53	0.024	ug/L	0.022	91	210	230	11
	Mn	55	0.001	ug/L	0.001	214	314	307	5
	Co	59	0.000	ug/L	0.001	220	73	73	10
>	Ge	72		ug/L			426798	397130	1
	Ni	60	0.000	ug/L	0.001	1625	26	24	9
	Ni	62	0.089	ug/L	0.031	35	48	76	15
	Cu	63	0.003	ug/L	0.003	78	88	100	13
	Cu	65	-0.004	ug/L	0.004	82	42	28	32
	Zn	66	0.001	ug/L	0 007	698	141	133	8
	Zn	67	-0.008	ug/L	0.008	103	21	18	9
	Zn	68	-0.008	ug/L	0.003	35	144	125	3
	As	75	0.037	ug/L	0.014	37	220	255	7
	As-1	75	0.158	ug/L	0.007	4	9153	8729	1
	Se	82	-0.006	ug/L	0.055	847	-1	-2	299
	Se	78	0.491	ug/L	0.053	10	9315	8854	1
	Mo	98	0.013	ug/L	0.001	8	35	78	3
	Y	89		ug/L			271155	254925	0
	Kr	83		ug/L			529	525	3
>	In	115		ug/L			840042	806547	0
	Ag	107	0.001	ug/L	0.000	21	32	39	4
	Cd	111	0.003	ug/L	0.001	36	72	81	4
	Cd	114	0.000	ug/L	0.001	711	44	44	15
	Sb	121	0.049	ug/L	0.006	12	346	942	7
	Sb	123	0.053	ug/L	0.008	14	257	740	9
	Ba	135	-0.001	ug/L	0.001	99	17	14	16
	Ba	137	0.001	ug/L	0.001	67	19	25	18
>	Tb	159		ug/L			1001666	967690	2
	Tl	205	0.004	ug/L	0.004	91	206	335	38
	Pb	208	0.000	ug/L	0.000	54	157	171	7
	Bi	209		ug/L			2293546	2234478	1
	Th	232	0.071	ug/L	0.005	6	1512	4083	2
	U	238	0.001	ug/L	0.000	13	29	85	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:48:44

Be

Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> **Li**	**6**		ug/L			681751	681027	0
Be	**9**	**0.004**	ug/L	0.001	34	8	17	17
C	**13**		ug/L			63994	67576	1
Cl	**37**		ug/L			3532807	3593519	3
> **Sc**	**45**		ug/L			674505	660697	1
V	**51**	**-0.003**	ug/L	0.005	141	6013	5847	0
V-1	**51**	**0.004**	ug/L	0.001	24	387	426	1
Cr	**52**	**-0.014**	ug/L	0.012	86	17778	17252	0
Cr	**53**	**0.008**	ug/L	0.003	33	210	216	2
Mn	**55**	**0.023**	ug/L	0.000	0	314	665	1
Co	**59**	**0.002**	ug/L	0.001	39	73	93	8
> **Ge**	**72**		ug/L			426798	408504	1
Ni	**60**	**0.009**	ug/L	0.001	16	26	47	6
Ni	**62**	**0.028**	ug/L	0.013	48	48	56	7
Cu	**63**	**0.063**	ug/L	0.003	5	88	446	4
Cu	**65**	**0.059**	ug/L	0.003	4	42	192	2
Zn	**66**	**0.489**	ug/L	0.011	2	141	865	1
Zn	**67**	**0.446**	ug/L	0.026	5	21	132	5
Zn	**68**	**0.507**	ug/L	0.022	4	144	685	2
As	**75**	**0.026**	ug/L	0.013	48	220	246	6
As-1	**75**	**0.097**	ug/L	0.095	97	9153	8894	1
Se	**82**	**0.000**	ug/L	0.076	245321	-1	-1	706
Se	**78**	**0.300**	ug/L	0.322	107	9315	9032	1
Mo	**98**	**0.005**	ug/L	0.001	20	35	51	7
Y	**89**		ug/L			271155	263082	1
Kr	**83**		ug/L			529	528	6
> **In**	**115**		ug/L			840042	832193	2
Ag	**107**	**0.001**	ug/L	0.001	171	32	39	30
Cd	**111**	**0.004**	ug/L	0.002	46	72	88	6
Cd	**114**	**0.001**	ug/L	0.001	71	44	53	11
Sb	**121**	**0.005**	ug/L	0.004	92	346	403	12
Sb	**123**	**0.004**	ug/L	0.005	136	257	288	14
Ba	**135**	**0.016**	ug/L	0.002	14	17	75	8
Ba	**137**	**0.019**	ug/L	0.001	7	19	142	5
> **Tb**	**159**		ug/L			1001666	996605	1
Tl	**205**	**0.002**	ug/L	0.003	197	206	252	35
Pb	**208**	**0.014**	ug/L	0.001	3	157	704	1
Bi	**209**		ug/L			2293546	2290038	1
Th	**232**	**0.057**	ug/L	0.017	30	1512	3710	19
U	**238**	**0.000**	ug/L	0.000	510	29	30	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:52:51
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662078	1
	Be	9	25.397	ug/L	0 550	2	8	59195	1
	C	13		ug/L			63994	66946	0
	Cl	37		ug/L			3532807	3624604	1
>	Sc	45		ug/L			674505	668252	0
	V	51	24.976	ug/L	0.084	0	6013	336437	1
	V-1	51	24.812	ug/L	0.194	0	387	331420	1
	Cr	52	25.249	ug/L	0.753	2	17778	306242	1
	Cr	53	24.715	ug/L	0.139	0	210	33000	0
	Mn	55	25.082	ug/L	0.657	2	314	394958	1
	Co	59	25.490	ug/L	0.158	0	73	307657	1
>	Ge	72		ug/L			426798	403505	1
	Ni	60	26.564	ug/L	0.599	2	26	66810	1
	Ni	62	26.067	ug/L	0.841	3	48	9377	4
	Cu	63	27.045	ug/L	0.084	0	88	152804	1
	Cu	65	27.848	ug/L	0.073	0	42	70668	0
	Zn	66	85.013	ug/L	0.205	0	141	125449	1
	Zn	67	78.284	ug/L	1.272	1	21	19492	0
	Zn	68	82.754	ug/L	0.763	0	144	88395	2
	As	75	26.135	ug/L	0.322	1	220	35879	2
	As-1	75	25.647	ug/L	0.326	1	9153	43768	1
	Se	82	84.354	ug/L	0.586	0	-1	12628	1
	Se	78	81.935	ug/L	1.161	1	9315	40358	0
	Mo	98	26.596	ug/L	0.317	1	35	94779	0
	Y	89		ug/L			271155	261404	2
	Kr	83		ug/L			529	535	7
>	In	115		ug/L			840042	836348	1
	Ag	107	28.100	ug/L	0.455	1	32	306611	0
	Cd	111	25.212	ug/L	0.202	0	72	105108	1
	Cd	114	25.212	ug/L	0.209	0	44	261045	0
	Sb	121	24.825	ug/L	0.540	2	346	318774	1
	Sb	123	24.911	ug/L	0.343	1	257	242917	0
	Ba	135	25.526	ug/L	0.273	1	17	96019	1
	Ba	137	25.439	ug/L	0.308	1	19	165509	0
>	Tb	159		ug/L			1001666	1012343	0
	Tl	205	25.523	ug/L	0.049	0	206	809663	0
	Pb	208	26.079	ug/L	0.188	0	157	1057206	0
	Bi	209		ug/L			2293546	2291502	0
	Th	232	24.401	ug/L	0.360	1	1512	951598	0
	U	238	24.197	ug/L	0.128	0	29	1011465	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:56:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	719001	1
	Be	**9**	**1.160**	ug/L	0.039	3	8	2943	2
	C	**13**		ug/L			63994	86323	1
	Cl	**37**		ug/L			3532807	3564561	2
>	**Sc**	**45**		ug/L			674505	777250	2
	V	**51**	**38.470**	ug/L	1.646	4	6013	598500	1
	V-1	**51**	**38.480**	ug/L	2.031	5	387	596934	2
	Cr	**52**	**32.065**	ug/L	0.358	1	17778	446801	1
	Cr	**53**	**32.266**	ug/L	1.670	5	210	49987	2
	Mn	**55**	**402.848**	ug/L	9.693	2	314	7370606	0
	Co	**59**	**9.370**	ug/L	0.523	5	73	131451	2
>	**Ge**	**72**		ug/L			426798	414419	1
	Ni	**60**	**29.094**	ug/L	0.166	0	26	75161	1
	Ni	**62**	**31.097**	ug/L	0.737	2	48	11479	3
	Cu	**63**	**28.196**	ug/L	0.261	0	88	163599	0
	Cu	**65**	**28.476**	ug/L	0.498	1	42	74211	1
	Zn	**66**	**107.635**	ug/L	1.512	1	141	163071	0
	Zn	**67**	**126.122**	ug/L	1.674	1	21	32240	0
	Zn	**68**	**118.252**	ug/L	1.413	1	144	129648	0
	As	**75**	**9.035**	ug/L	0.026	0	220	12879	1
	As-1	**75**	**8.809**	ug/L	0.071	0	9153	21273	0
	Se	**82**	**-0.905**	ug/L	0.050	5	-1	-141	6
	Se	**78**	**-0.135**	ug/L	0.166	122	9315	8991	0
	Mo	**98**	**0.380**	ug/L	0.019	4	35	1424	3
	Y	**89**		ug/L			271155	492422	0
	Kr	**83**		ug/L			529	1244	3
>	**In**	**115**		ug/L			840042	826716	1
	Ag	**107**	**0.315**	ug/L	0.009	3	32	3430	1
	Cd	**111**	**0.713**	ug/L	0.125	17	72	3003	15
	Cd	**114**	**0.346**	ug/L	0.007	2	44	3585	1
	Sb	**121**	**0.034**	ug/L	0.006	17	346	775	8
	Sb	**123**	**0.038**	ug/L	0.005	12	257	621	6
	Ba	**135**	**387.808**	ug/L	5.365	1	17	1441714	0
	Ba	**137**	**408.216**	ug/L	6.194	1	19	2625099	0
>	**Tb**	**159**		ug/L			1001666	1020055	0
	Tl	**205**	**0.134**	ug/L	0.004	2	206	4482	2
	Pb	**208**	**25.521**	ug/L	0.248	0	157	1042531	1
	Bi	**209**		ug/L			2293546	2192860	0
	Th	**232**	**5.279**	ug/L	0.055	1	1512	208646	1
	U	**238**	**2.068**	ug/L	0.018	0	29	87116	0

VR30 : 8934.1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:01:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	724604	2
	Be	9	1.148	ug/L	0.029	2	8	2936	3
	C	13		ug/L			63994	81902	0
	Cl	37		ug/L			3532807	3636535	0
>	Sc	45		ug/L			674505	784571	1
	V	51	37.021	ug/L	0.622	1	6013	582032	0
	V-1	51	36.875	ug/L	0.558	1	387	577965	0
	Cr	52	26.037	ug/L	0.960	3	17778	370050	1
	Cr	53	25.857	ug/L	0.598	2	210	40515	0
	Mn	55	553.659	ug/L	2.164	0	314	10229656	1
	Co	59	9.225	ug/L	0.239	2	73	130737	1
>	Ge	72		ug/L			426798	414791	0
	Ni	60	31.326	ug/L	0.448	1	26	80995	0
	Ni	62	33.508	ug/L	0.583	1	48	12374	1
	Cu	63	31.851	ug/L	0.470	1	88	184980	1
	Cu	65	32.837	ug/L	0.188	0	42	85650	0
	Zn	66	100.666	ug/L	2.190	2	141	152666	1
	Zn	67	118.239	ug/L	1.860	1	21	30256	1
	Zn	68	111.058	ug/L	1.986	1	144	121897	2
	As	75	9.551	ug/L	0.134	1	220	13613	0
	As-1	75	9.311	ug/L	0 174	1	9153	21999	0
	Se	82	-0.624	ug/L	0.083	13	-1	-97	13
	Se	78	-0.060	ug/L	0.179	297	9315	9029	0
	Mo	98	0.382	ug/L	0.014	3	35	1435	3
	Y	89		ug/L			271155	530125	0
	Kr	83		ug/L			529	1164	4
>	In	115		ug/L			840042	830296	2
	Ag	107	0.430	ug/L	0.016	3	32	4686	2
	Cd	111	0.760	ug/L	0.034	4	72	3217	4
	Cd	114	0.363	ug/L	0.011	3	44	3771	2
	Sb	121	0.016	ug/L	0.005	28	346	547	9
	Sb	123	0.015	ug/L	0.005	32	257	397	10
	Ba	135	354.733	ug/L	9.097	2	17	1324142	0
	Ba	137	364.359	ug/L	6.813	1	19	2352891	0
>	Tb	159		ug/L			1001666	1025497	0
	Tl	205	0.148	ug/L	0.001	0	206	4972	1
	Pb	208	20.049	ug/L	0.183	0	157	823367	0
	Bi	209		ug/L			2293546	2154270	0
	Th	232	5.438	ug/L	0.055	1	1512	216027	0
	U	238	2.478	ug/L	0.027	1	29	104949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:05:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	736751	0
	Be	9	1.143	ug/L	0.028	2	8	2974	2
	C	13		ug/L			63994	83590	2
	Cl	37		ug/L			3532807	3690345	4
>	Sc	45		ug/L			674505	808820	3
	V	51	35.402	ug/L	1.755	4	6013	573523	1
	V-1	51	35.179	ug/L	1.507	4	387	567930	0
	Cr	52	26.766	ug/L	1.154	4	17778	391319	0
	Cr	53	26.276	ug/L	0.757	2	210	42430	2
	Mn	55	389.302	ug/L	21.927	5	314	7406021	2
	Co	59	8.490	ug/L	0.286	3	73	123984	0
>	Ge	72		ug/L			426798	415316	0
	Ni	60	26.317	ug/L	0.236	0	26	68138	0
	Ni	62	29.105	ug/L	0.757	2	48	10768	2
	Cu	63	34.877	ug/L	0.562	1	88	202804	2
	Cu	65	36.036	ug/L	0.471	1	42	94111	1
	Zn	66	98.266	ug/L	1.350	1	141	149236	1
	Zn	67	111.843	ug/L	0.594	0	21	28658	0
	Zn	68	103.809	ug/L	0.865	0	144	114089	0
	As	75	8.086	ug/L	0.088	1	220	11574	1
	As-1	75	7.877	ug/L	0.078	0	9153	20007	0
	Se	82	-0.609	ug/L	0.032	5	-1	-95	5
	Se	78	0.132	ug/L	0.132	100	9315	9117	0
	Mo	98	0.300	ug/L	0.012	4	35	1136	4
	Y	89		ug/L			271155	603270	1
	Kr	83		ug/L			529	1208	3
>	In	115		ug/L			840042	818477	1
	Ag	107	0.741	ug/L	0.011	1	32	7944	0
	Cd	111	0.705	ug/L	0.038	5	72	2943	3
	Cd	114	0.263	ug/L	0.005	1	44	2706	2
	Sb	121	0.007	ug/L	0.001	15	346	422	2
	Sb	123	0.010	ug/L	0.004	43	257	342	10
	Ba	135	283.472	ug/L	6.380	2	17	1043301	1
	Ba	137	285.217	ug/L	7.970	2	19	1815590	1
>	Tb	159		ug/L			1001666	1036163	0
	Tl	205	0.147	ug/L	0.001	0	206	4980	0
	Pb	208	17.768	ug/L	0.167	0	157	737299	0
	Bi	209		ug/L			2293546	2090871	4
	Th	232	5.269	ug/L	0.067	1	1512	211539	1
	U	238	2.828	ug/L	0.039	1	29	121036	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:09:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	700421	1
	Be	9	0.846	ug/L	0.026	3	8	2095	2
	C	13		ug/L			63994	89314	2
	Cl	37		ug/L			3532807	3553860	1
>	Sc	45		ug/L			674505	752480	0
	V	51	30.951	ug/L	0.054	0	6013	467875	0
	V-1	51	30.864	ug/L	0.237	0	387	464099	1
	Cr	52	20.723	ug/L	0.389	1	17778	286614	1
	Cr	53	20.712	ug/L	0.285	1	210	31179	1
	Mn	55	837.648	ug/L	2.980	0	314	14843840	0
	Co	59	7.657	ug/L	0.107	1	73	104127	1
>	Ge	72		ug/L			426798	412325	1
	Ni	60	24.273	ug/L	0.372	1	26	62388	1
	Ni	62	25.239	ug/L	0.300	1	48	9276	0
	Cu	63	15.385	ug/L	0.193	1	88	88849	0
	Cu	65	15.885	ug/L	0.506	3	42	41194	1
	Zn	66	152.222	ug/L	0.679	0	141	229417	1
	Zn	67	165.866	ug/L	3.353	2	21	42174	0
	Zn	68	161.828	ug/L	4.372	2	144	176440	1
	As	75	9.871	ug/L	0.079	0	220	13978	1
	As-1	75	9.821	ug/L	0.198	2	9153	22580	0
	Se	82	-0.508	ug/L	0.081	15	-1	-79	17
	Se	78	0.193	ug/L	0.469	243	9315	9073	0
	Mo	98	0.397	ug/L	0.015	3	35	1480	1
	Y	89		ug/L			271155	348931	3
	Kr	83		ug/L			529	888	4
>	In	115		ug/L			840042	814873	0
	Ag	107	0.238	ug/L	0.011	4	32	2566	4
	Cd	111	1.281	ug/L	0.049	3	72	5269	3
	Cd	114	1.045	ug/L	0.012	1	44	10582	1
	Sb	121	0.038	ug/L	0.003	7	346	805	5
	Sb	123	0.038	ug/L	0.002	6	257	608	4
	Ba	135	485.039	ug/L	10.130	2	17	1777447	1
	Ba	137	505.252	ug/L	1.708	0	19	3202923	1
>	Tb	159		ug/L			1001666	991390	1
	Tl	205	0.125	ug/L	0.002	1	206	4092	1
	Pb	208	37.627	ug/L	0.577	1	157	1493627	1
	Bi	209		ug/L			2293546	2107174	4
	Th	232	4.088	ug/L	0.047	1	1512	157374	0
	U	238	0.596	ug/L	0.003	0	29	24428	1

VR30 · 89314

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:13:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	716563	1
	Be	9	0.784	ug/L	0.031	3	8	1987	3
	C	13		ug/L			63994	103357	3
	Cl	37		ug/L			3532807	3657254	1
>	Sc	45		ug/L			674505	743893	1
	V	51	32.403	ug/L	0.646	1	6013	483848	1
	V-1	51	32.243	ug/L	0.452	1	387	479229	1
	Cr	52	23.860	ug/L	0.751	3	17778	323207	2
	Cr	53	23.571	ug/L	0.151	0	210	35045	1
	Mn	55	1071.543	ug/L	22.639	2	314	18770515	2
	Co	59	7.660	ug/L	0.159	2	73	102959	2
>	Ge	72		ug/L			426798	424780	1
	Ni	60	20.053	ug/L	0.788	3	26	53090	2
	Ni	62	21.771	ug/L	0.287	1	48	8251	1
	Cu	63	19.769	ug/L	0.432	2	88	117587	1
	Cu	65	20.134	ug/L	0.047	0	42	53798	1
	Zn	66	128.889	ug/L	0.215	0	141	200148	1
	Zn	67	133.184	ug/L	1.420	1	21	34896	0
	Zn	68	134.415	ug/L	0.739	0	144	151043	0
	As	75	17.160	ug/L	0.274	1	220	24873	1
	As-1	75	16.991	ug/L	0.299	1	9153	33598	1
	Se	82	-0.130	ug/L	0.143	109	-1	-22	101
	Se	78	-0.016	ug/L	0.315	1980	9315	9264	0
	Mo	98	0.499	ug/L	0.010	1	35	1908	0
	Y	89		ug/L			271155	364431	1
	Kr	83		ug/L			529	790	6
>	In	115		ug/L			840042	848740	1
	Ag	107	0.109	ug/L	0.009	8	32	1239	6
	Cd	111	1.714	ug/L	0.025	1	72	7317	0
	Cd	114	1.613	ug/L	0.022	1	44	16994	0
	Sb	121	0.093	ug/L	0.005	5	346	1555	2
	Sb	123	0.092	ug/L	0.001	1	257	1171	2
	Ba	135	272.461	ug/L	2.209	0	17	1039913	0
	Ba	137	275.435	ug/L	5.409	1	19	1818346	1
>	Tb	159		ug/L			1001666	1013774	1
	Tl	205	0.145	ug/L	0.004	2	206	4801	2
	Pb	208	71.785	ug/L	0.480	0	157	2913973	1
	Bi	209		ug/L			2293546	2210852	2
	Th	232	3.564	ug/L	0.013	0	1512	140492	1
	U	238	0.733	ug/L	0.001	0	29	30721	1

VR30 : 860315

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:17:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	707916	0
	Be	9	0.679	ug/L	0.018	2	8	1700	2
	C	13		ug/L			63994	91531	0
	Cl	37		ug/L			3532807	3715678	3
>	Sc	45		ug/L			674505	759493	2
	V	51	26.274	ug/L	0.338	1	6013	401839	1
	V-1	51	26.192	ug/L	0.422	1	387	397489	0
	Cr	52	20.703	ug/L	0.574	2	17778	288948	1
	Cr	53	20.583	ug/L	0.814	3	210	31260	2
	Mn	55	1550.240	ug/L	48.001	3	314	27721628	2
	Co	59	8.053	ug/L	0.252	3	73	110491	2
>	Ge	72		ug/L			426798	419774	0
	Ni	60	29.091	ug/L	1.208	4	26	76141	4
	Ni	62	31.009	ug/L	1.240	3	48	11595	4
	Cu	63	16.437	ug/L	0.242	1	88	96652	2
	Cu	65	16.833	ug/L	0.366	2	42	44459	2
	Zn	66	132.794	ug/L	2.558	1	141	203787	2
	Zn	67	136.357	ug/L	1.006	0	21	35310	1
	Zn	68	137.506	ug/L	2.163	1	144	152707	2
	As	75	21.115	ug/L	0.121	0	220	30198	0
	As-1	75	21.012	ug/L	0.079	0	9153	38933	0
	Se	82	-0.379	ug/L	0.117	30	-1	-60	30
	Se	78	0.201	ug/L	0.205	101	9315	9243	1
	Mo	98	0.435	ug/L	0.010	2	35	1646	1
	Y	89		ug/L			271155	337104	1
	Kr	83		ug/L			529	876	4
>	In	115		ug/L			840042	844861	1
	Ag	107	0.143	ug/L	0.002	1	32	1609	2
	Cd	111	1.620	ug/L	0.013	0	72	6891	1
	Cd	114	1.463	ug/L	0.042	2	44	15341	2
	Sb	121	0.106	ug/L	0.003	2	346	1723	3
	Sb	123	0.105	ug/L	0.012	11	257	1295	8
	Ba	135	259.359	ug/L	3.592	1	17	985399	1
	Ba	137	260.680	ug/L	6.338	2	19	1713063	1
>	Tb	159		ug/L			1001666	1000018	1
	Tl	205	0.177	ug/L	0.001	0	206	5736	2
	Pb	208	84.535	ug/L	0.599	0	157	3384856	1
	Bi	209		ug/L			2293546	2210273	1
	Th	232	3.850	ug/L	0.021	0	1512	149608	1
	U	238	0.496	ug/L	0.003	0	29	20517	2

VR30 . 88316

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:22:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	703860	0
	Be	**9**	**0.681**	ug/L	0.005	0	8	1695	0
	C	**13**		ug/L			63994	96598	0
	Cl	**37**		ug/L			3532807	3552616	0
>	**Sc**	**45**		ug/L			674505	762937	2
	V	**51**	**25.187**	ug/L	1.220	4	6013	386982	2
	V-1	**51**	**25.085**	ug/L	1.238	4	387	382203	2
	Cr	**52**	**16.832**	ug/L	0.431	2	17778	239745	1
	Cr	**53**	**16.725**	ug/L	0.427	2	210	25563	0
	Mn	**55**	**926.230**	ug/L	34.807	3	314	16631158	1
	Co	**59**	**6.191**	ug/L	0.195	3	73	85321	0
>	**Ge**	**72**		ug/L			426798	419352	1
	Ni	**60**	**19.378**	ug/L	0.309	1	26	50659	1
	Ni	**62**	**20.963**	ug/L	0.573	2	48	7843	1
	Cu	**63**	**15.238**	ug/L	0.387	2	88	89491	1
	Cu	**65**	**15.637**	ug/L	0.136	0	42	41253	1
	Zn	**66**	**147.729**	ug/L	1.213	0	141	226439	1
	Zn	**67**	**147.844**	ug/L	1.835	1	21	38239	0
	Zn	**68**	**151.463**	ug/L	5.099	3	144	167952	1
	As	**75**	**12.463**	ug/L	0.282	2	220	17890	0
	As-1	**75**	**12.437**	ug/L	0.420	3	9153	26683	0
	Se	**82**	**-0.138**	ug/L	0.187	135	-1	-23	125
	Se	**78**	**0.321**	ug/L	0.565	176	9315	9278	0
	Mo	**98**	**0.549**	ug/L	0.019	3	35	2068	2
	Y	**89**		ug/L			271155	350282	1
	Kr	**83**		ug/L			529	728	7
>	**In**	**115**		ug/L			840042	850262	0
	Ag	**107**	**0.190**	ug/L	0.007	3	32	2135	2
	Cd	**111**	**1.580**	ug/L	0.017	1	72	6766	0
	Cd	**114**	**1.442**	ug/L	0.032	2	44	15218	1
	Sb	**121**	**0.086**	ug/L	0.002	2	346	1471	1
	Sb	**123**	**0.085**	ug/L	0.002	2	257	1106	1
	Ba	**135**	**197.434**	ug/L	2.916	1	17	754941	1
	Ba	**137**	**197.275**	ug/L	1.656	0	19	1304863	0
>	**Tb**	**159**		ug/L			1001666	1013813	1
	Tl	**205**	**0.142**	ug/L	0.004	2	206	4727	2
	Pb	**208**	**62.224**	ug/L	0.839	1	157	2525765	0
	Bi	**209**		ug/L			2293546	2206898	0
	Th	**232**	**3.660**	ug/L	0.039	1	1512	144241	0
	U	**238**	**1.343**	ug/L	0.032	2	29	56251	1

VR30 : 0691.7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments: Be
Sample Date/Time: Friday, November 16, 2012 17:26:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	693496	1
	Be	9	0.640	ug/L	0.010	1	8	1571	0
	C	13		ug/L			63994	102486	1
	Cl	37		ug/L			3532807	3639665	2
>	Sc	45		ug/L			674505	751325	3
	V	51	21.332	ug/L	0.573	2	6013	323900	1
	V-1	51	21.291	ug/L	0.640	3	387	319596	0
	Cr	52	13.338	ug/L	0.460	3	17778	191161	1
	Cr	53	13.414	ug/L	0.668	4	210	20224	2
	Mn	55	1206.813	ug/L	62.140	5	314	21333427	2
	Co	59	5.599	ug/L	0.294	5	73	75962	2
>	Ge	72		ug/L			426798	434648	1
	Ni	60	12.429	ug/L	0.387	3	26	33691	2
	Ni	62	13.580	ug/L	0.218	1	48	5285	2
	Cu	63	13.421	ug/L	0.129	0	88	81720	1
	Cu	65	13.972	ug/L	0.045	0	42	38214	1
	Zn	66	141.648	ug/L	5.155	3	141	225005	2
	Zn	67	151.552	ug/L	3.689	2	21	40632	2
	Zn	68	151.843	ug/L	7.046	4	144	174524	3
	As	75	9.977	ug/L	0.085	0	220	14892	0
	As-1	75	9.784	ug/L	0.170	1	9153	23749	0
	Se	82	-0.022	ug/L	0.032	147	-1	-5	96
	Se	78	-0.324	ug/L	0.389	119	9315	9351	0
	Mo	98	0.259	ug/L	0.011	4	35	1031	4
	Y	89		ug/L			271155	357586	0
	Kr	83		ug/L			529	681	0
>	In	115		ug/L			840042	845748	1
	Ag	107	0.085	ug/L	0.005	5	32	969	6
	Cd	111	1.924	ug/L	0.026	1	72	8176	0
	Cd	114	1.824	ug/L	0.008	0	44	19144	0
	Sb	121	0.159	ug/L	0.003	2	346	2415	2
	Sb	123	0.155	ug/L	0.001	0	257	1788	1
	Ba	135	378.155	ug/L	3 929	1	17	1438227	0
	Ba	137	393.247	ug/L	3.692	0	19	2587146	0
>	Tb	159		ug/L			1001666	1020200	0
	Tl	205	0.148	ug/L	0.004	2	206	4951	1
	Pb	208	75.614	ug/L	0.482	0	157	3088791	0
	Bi	209		ug/L			2293546	2244736	0
	Th	232	3.324	ug/L	0.015	0	1512	131969	0
	U	238	0.726	ug/L	0.011	1	29	30599	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:31:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	681494 ✔	1
	Be	9	50.478	ug/L	0.254	0	8	121123	1
	C	13		ug/L			63994	67045	1
	Cl	37		ug/L			3532807	3776792	1
>	Sc	45		ug/L			674505	708035 ✔	0
	V	51	47.413	ug/L	0.286	0	6013	671036	0
	V-1	51	47.367	ug/L	0.481	1	387	669938	0
	Cr	52	47.507	ug/L	0.727	1	17778	594188	2
	Cr	53	47.355	ug/L	0.526	1	210	66792	0
	Mn	55	47.753	ug/L	0.279	0	314	796580	1
	Co	59	47.195	ug/L	1.375	2	73	603470	3
>	Ge	72		ug/L			426798	418703 ✔	0
	Ni	60	50.083	ug/L	0.352	0	26	130712	1
	Ni	62	49.172	ug/L	0.666	1	48	18311	2
	Cu	63	51.258	ug/L	1.704	3	88	300380	2
	Cu	65	50.943	ug/L	0.075	0	42	134110	0
	Zn	66	49.953	ug/L	0.540	1	141	76543	0
	Zn	67	50.112	ug/L	1.717	3	21	12956	3
	Zn	68	50.325	ug/L	1.512	3	144	55828	2
	As	75	50.747	ug/L	0.631	1	220	72081	0
	As-1	75	50.464	ug/L	0.690	1	9153	80672	0
	Se	82	51.650	ug/L	0.146	0	-1	8023	0
	Se	78	50.630	ug/L	0.458	0	9315	29371	0
	Mo	98	52.332	ug/L	0.824	1	35	193482	1
	Y	89		ug/L			271155	268633	1
	Kr	83		ug/L			529	547	4
>	In	115		ug/L			840042	819510 ✔	0
	Ag	107	52.858	ug/L	0.923	1	32	565220	1
	Cd	111	50.291	ug/L	0.330	0	72	205379	0
	Cd	114	50.402	ug/L	0.169	0	44	511354	0
	Sb	121	50.420	ug/L	0.100	0	346	634186	0
	Sb	123	50.220	ug/L	0.180	0	257	479663	0
	Ba	135	49.606	ug/L	0.538	1	17	182840	0
	Ba	137	49.400	ug/L	0.471	0	19	314952	0
>	Tb	159		ug/L			1001666	996761 ✔	0
	Tl	205	48.390	ug/L	0.396	0	206	1511241	0
	Pb	208	49.165	ug/L	0.377	0	157	1962289	0
	Bi	209		ug/L			2293546	2188755	0
	Th	232	47.439	ug/L	0.568	1	1512	1820219	1
	U	238	47.871	ug/L	0.092	0	29	1970232	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:37:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	669220 ✓	1
Be	9	0.001	ug/L	0.002	125	8	12	36
C	13		ug/L			63994	64513	1
Cl	37		ug/L			3532807	3655930	4
Sc	45		ug/L			674505	670359 ✓	3
V	51	-0.022	ug/L	0.011	51	6013	5686	3
V-1	51	-0.020	ug/L	0.000	1	387	114	6
Cr	52	-0.075	ug/L	0.035	46	17778	16797	2
Cr	53	-0.069	ug/L	0.008	10	210	116	6
Mn	55	0.003	ug/L	0.001	45	314	358	2
Co	59	-0.000	ug/L	0.001	509	73	71	6
Ge	72		ug/L			426798	415373 ✓	1
Ni	60	-0.001	ug/L	0.001	114	26	23	8
Ni	62	0.011	ug/L	0.008	74	48	51	6
Cu	63	-0.000	ug/L	0.001	335	88	84	6
Cu	65	-0.004	ug/L	0.003	92	42	31	26
Zn	66	-0.005	ug/L	0.010	200	141	130	12
Zn	67	0.014	ug/L	0.023	164	21	24	23
Zn	68	-0.010	ug/L	0.005	52	144	129	5
As	75	0.017	ug/L	0.020	119	220	237	10
As-1	75	0.129	ug/L	0.102	78	9153	9089	0
Se	82	-0.044	ug/L	0.030	67	-1	-8	53
Se	78	0.412	ug/L	0.342	83	9315	9228	0
Mo	98	0.003	ug/L	0.001	28	35	45	5
Y	89		ug/L			271155	259185	1
Kr	83		ug/L			529	543	2
In	115		ug/L			840042	821372 ✓	0
Ag	107	-0.000	ug/L	0.000	70	32	28	10
Cd	111	0.001	ug/L	0.001	133	72	74	5
Cd	114	-0.001	ug/L	0.001	177	44	38	23
Sb	121	0.033	ug/L	0.006	17	346	758	8
Sb	123	0.037	ug/L	0.005	12	257	607	6
Ba	135	-0.000	ug/L	0.001	290	17	15	29
Ba	137	0.001	ug/L	0.000	54	19	22	9
Tb	159		ug/L			1001666	962148 ✓	0
Tl	205	0.005	ug/L	0.005	97	206	343	41
Pb	208	0.001	ug/L	0.000	16	157	194	3
Bi	209		ug/L			2293546	2222751	0
Th	232	0.054	ug/L	0.004	6	1512	3435	4
U	238	0.001	ug/L	0.000	3	29	60	2

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-7-12

Page: 1 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
STD 0.0	DMM	1X			
" 0.1					
" 0.5					
" 1.0					
" 2.0					
" 5.0					
" 10.0					
ICV			7.26	Beg in CLP %R=91	✓
ICB			-0.01		✓
CCV1			3.49	%R=92	✓
CCB1			-0.00		✓
CRA			0.10		✓
VSIB MB1			0.01		✓
" MB1SPK			1.90	%R=95	✓
" A			1.08		
" ADUP			1.05	RPD=2.81	✓
" ASPK			2.04	%R=96	✓
" B					
" C					
" D					
" E					
CCV2			3.45	%R=91	✓
CCB2			0.00		✓
VSIB F				DEL CVOUT	
" G					
" H					
" I					
" J					
" K					
" L	↓	↓		→	

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 2 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR37 MB1	5mm	1X	0.00	DEL CN out ✓
" MB1SPK			2.04	%R=102 ✓
" A			0.19	
CCV3			1.76	%R=44 LOW X
CCV4			3.63	%R=91 ✓
CCB3			0.00	✓
VS18 F				
" G				
" H				
" I				
" J				
" K				
" L				
VR37 MB1			0.01	✓
" MB1SPK			1.74	%R=87 ✓
" A			0.16	
CCV5			3.59	%R=90 ✓
CCB4			0.00	✓
VR37 ADUP			0.15	✓
" ASPK			1.12	%R=96 ✓
" B				
" C				
" D				
" E				
" F				
" G				
" H				
" I				
CCV6			3.60	%R=90 ✓
CCB5	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-7-12

Page: 3 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
VR87	J	SMM	1X		
"	K				
"	L				
"	M				
"	N				
"	O				
VR88	MBI			-0.00	✓
"	MBISPK			1.81	%R=91 ✓
"	A			0.11	
"	AOUP			0.10	✓
CCV7				3.64	%R=91 ✓
CCB6				0.00	✓
VR58	ASPK			1.07	%R=96 ✓
"	B				
"	C				
"	D				
"	E				
"	F				
"	G				
"	H				
"	I				
"	J				
CCV8				3.61	%R=90 ✓
CCB7				-0.00	✓
VR82	A				
"	B				
"	C				
"	D				
"	E				
"	F	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2092-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 4 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR82 G	SMM	1X		
" H				
" I				
CCV9			3.56	%R=89 ✓
CCB8			0.00	✓
VR80 MB1			-0.00	✓
" MB1SPK			1.82	%R=91 ✓
" A			0.92	
" AOUP			0.93	RPD=1.08 ✓
" AOUPK			1.78	%R=86 ✓
" B				
" C				
" D				
" E				
" F				
CCV10			3.71	%R=93 ✓
CCB9			-0.00	✓
VR80 G				
" H				
" I				
" J				
" K				
" L				
VR86 MB1			0.00	✓
" MB1SPK			1.89	%R=95 ✓
" A			0.77	
" AOUP			0.74	RPD=3.97 ✓
CCV11			3.72	%R=93 ✓
CCB10			0.00	✓
VR86 AOUPK			1.72	%R=95 ✓ 11-23-12

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2092-7

ICV/CCV: 56-18

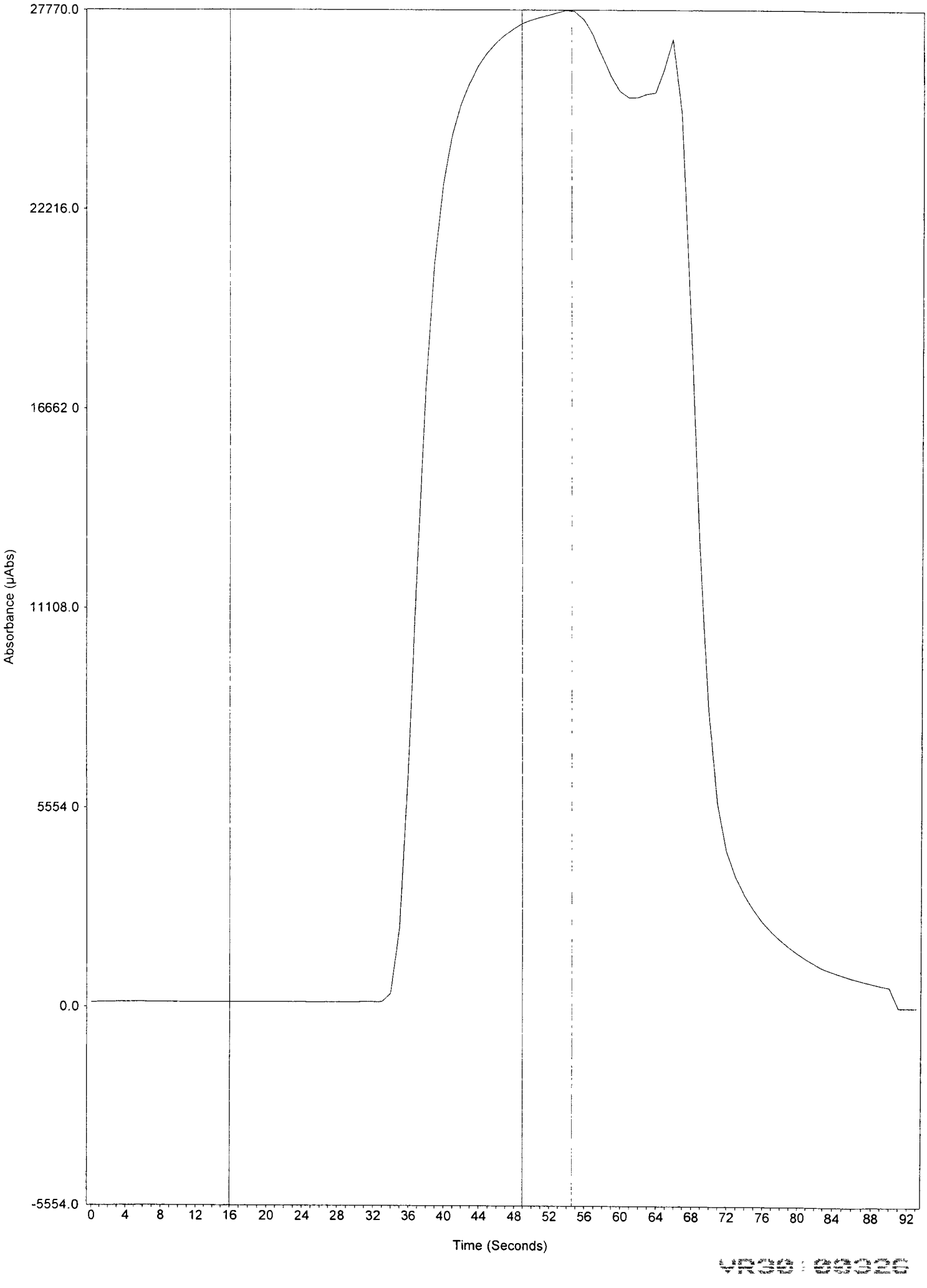
ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) Analysis Date: 11-17-12

	Analyst 11-17 DM	Peer 11-19	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓		
Calibration Verification			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	✓	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See VR33 ASPK
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Reporting			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Nonconformance Documentation	✓	✓	See CAF

VR33 : 80925


27770.0
22216.0
16662 0
11108.0
5554 0
0.0
-5554.0
Absorbance (µAbs)
0
4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)

CETAC Hg Analysis Report - 12111700.DB - Saturday, November 17, 2012, 2:36:51 PM

✓ 11-19-12 KS

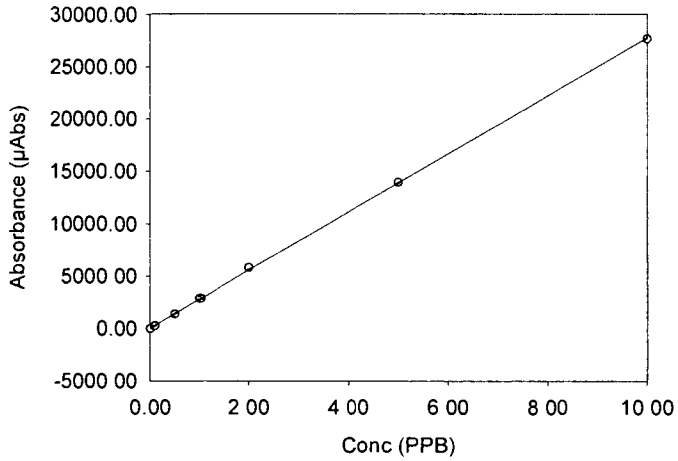
Analyst
Date Started Saturday, November 17, 2012, 06:44:12
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	17-Nov-2012, 06:44	10.00	0.46	27500.00	1 00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	17-Nov-2012, 06:46	0 00	4.58	-33.10	1.00	
Standard #1	17-Nov-2012, 06 47	0.10	0.53	261 00	1 00	
Standard #2	17-Nov-2012, 06:49	0.50	0.24	1400 00	1.00	
Standard #3	17-Nov-2012, 06.51	1.00	0 45	2840.00	1 00	
Standard #4	17-Nov-2012, 06:52	2.00	0 54	5790 00	1 00	
Standard #5	17-Nov-2012, 06.54	5.00	0.29	14000 00	1.00	
Standard #6	17-Nov-2012, 06:56	10 00	0.39	27700.00	1 00	

Calibration Data



Int.	0.000
Slope	2778 015
Correlation	0 99994

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	17-Nov-2012, 07:05	7.26	0.75	20200 00	1 00	
ICB	17-Nov-2012, 07:06	-0.01	13.00	-18 40	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07 08	3 69	0.28	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:09	-0.00	56.00	-2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	17-Nov-2012, 07:11	0.10	0.42	267.00	1 00	
VS18 MB1 SMM	17-Nov-2012, 07:13	0 01	13.00	20.30	1.00	
VS18 MB1SPK SMM	17-Nov-2012, 07:14	1.90	0.60	5270 00	1.00	
VS18 A SMM	17-Nov-2012, 07:16	1.08	0.64	3000 00	1 00	
VS18 ADUP SMM	17-Nov-2012, 07:17	1.05	0.46	2910.00	1 00	
VS18 ASPK SMM	17-Nov-2012, 07:19	2.04	0.80	5660.00	1 00	
VS18 B SMM	17-Nov-2012, 07 21	0.70	0.68	1940.00	1.00	
VS18 C SMM	17-Nov-2012, 07:22	0.59	0.86	1640 00	1.00	
VS18 D SMM	17-Nov-2012, 07:24	0.77	0.48	2150 00	1.00	
VS18 E SMM	17-Nov-2012, 07:26	0 71	0.45	1970.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:27	3.65	0.49	10100.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 07:29 22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:29	0.00	11.10	10.40	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 07:31	0.31	1.08	873 00	1.00	
VS18 G SMM	17-Nov-2012, 07:32	0.25	0.62	691.00	1.00	
VS18 H SMM	17-Nov-2012, 07:34	1.02	1 42	2840.00	1.00	
VS18 I SMM	17-Nov-2012, 07:35	3.94	0 68	10900.00	1.00	
VS18 J SMM	17-Nov-2012, 07:37	2 53	0.19	7030.00	1.00	
VS18 K SMM	17-Nov-2012, 07:38	1 94	0 22	5380 00	1 00	
VS18 L SMM	17-Nov-2012, 07.40	0.88	0.27	2440.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 07:42	0.00	17.70	12.90	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 07:43	2.04	0.47	5660.00	1.00	
VR37 A SMM	17-Nov-2012, 07:45	0 19	0.58	514 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07.47	1 76	0.86	4880 00	1 00	Q - Low %R
QC Standard	17-Nov-2012, 07:58	3.63	0.54	10100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:00	0.00	11.60	11.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 08:02	0.30	0 58	846.00	1 00	
VS18 G SMM	17-Nov-2012, 08:03	0.25	0.72	683.00	1 00	
VS18 H SMM	17-Nov-2012, 08:05	1.00	0.78	2780 00	1.00	
VS18 I SMM	17-Nov-2012, 08.06	3 88	0.67	10800 00	1.00	
VS18 J SMM	17-Nov-2012, 08:08	2 42	0.57	6730.00	1.00	
VS18 K SMM	17-Nov-2012, 08:09	1.81	0.67	5030 00	1.00	
VS18 L SMM	17-Nov-2012, 08.11	0.79	0 94	2190 00	1.00	
VR37 MB1 SMM	17-Nov-2012, 08:13	0 01	4 00	19.20	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 08:14	1.74	0.56	4840.00	1 00	
VR37 A SMM	17-Nov-2012, 08:16	0.16	1.44	442.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08 18	3.59	0.50	9980.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:19	0.00	13.00	9 15	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 ADUP SMM	17-Nov-2012, 08 21	0.15	0.54	416 00	1 00	
VR37 ASPK SMM	17-Nov-2012, 08.23	1.12	0.62	3120.00	1 00	
VR37 B SMM	17-Nov-2012, 08:24	0.09	0.36	242.00	1 00	
VR37 C SMM	17-Nov-2012, 08:26	0.28	1.03	768.00	1.00	
VR37 D SMM	17-Nov-2012, 08:27	1.41	0.61	3910.00	1.00	
VR37 E SMM	17-Nov-2012, 08:29	2.23	0.82	6190 00	1.00	
VR37 F SMM	17-Nov-2012, 08:31	0.79	0.67	2210 00	1.00	
VR37 G SMM	17-Nov-2012, 08.32	2.39	0.51	6630.00	1.00	
VR37 H SMM	17-Nov-2012, 08:34	3.87	0.37	10800 00	1.00	
VR37 I SMM	17-Nov-2012, 08:35	0.48	0.20	1340 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:37	3.60	0.66	9990.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:39	0.00	124.00	1.77	1 00	

Analyst
Date Started Saturday, November 17, 2012, 08:40.49
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 J SMM	17-Nov-2012, 08:40	1 27	0 51	3520.00	1 00	
VR37 K SMM	17-Nov-2012, 08.42	1 51	2.55	4190.00	1 00	
VR37 L SMM	17-Nov-2012, 08:44	1.16	0 58	3220.00	1.00	
VR37 M SMM	17-Nov-2012, 08:45	1 05	0.38	2900.00	1.00	
VR37 N SMM	17-Nov-2012, 08:47	1 19	0.74	3310.00	1.00	
VR37 O SMM	17-Nov-2012, 08:48	0.83	0.81	2300 00	1.00	
VR58 MB1 SMM	17-Nov-2012, 08:50	-0.00	33.50	-6.40	1.00	
VR58 MB1SPK SMM	17-Nov-2012, 08:52	1.81	0.54	5040.00	1 00	
VR58 A SMM	17-Nov-2012, 08.53	0 11	0.89	295 00	1.00	
VR58 ADUP SMM	17-Nov-2012, 08.55	0.10	0.57	281.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:56	3.64	0.48	10100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:58	0.00	9 27	8 18	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR58 ASPK SMM	17-Nov-2012, 09:00	1.07	0 63	2970.00	1.00	
VR58 B SMM	17-Nov-2012, 09:01	0.10	0.59	283.00	1.00	
VR58 C SMM	17-Nov-2012, 09:03	0.11	0.53	309.00	1.00	
VR58 D SMM	17-Nov-2012, 09.05	0.10	0.66	274 00	1.00	
VR58 E SMM	17-Nov-2012, 09:06	0 11	0 48	304 00	1 00	
VR58 F SMM	17-Nov-2012, 09.08	0.41	0.62	1150 00	1.00	
VR58 G SMM	17-Nov-2012, 09:10	0.06	0 39	175.00	1.00	
VR58 H SMM	17-Nov-2012, 09 11	0 06	0.63	161 00	1.00	
VR58 I SMM	17-Nov-2012, 09.13	0.10	1.03	271.00	1.00	
VR58 J SMM	17-Nov-2012, 09:14	0 05	1 41	126.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09.16	3.61	0 66	10000 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09.18	-0.00	300.00	-1 14	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR82 A SMM	17-Nov-2012, 09:19	0.22	0.73	605 00	1.00	
VR82 B SMM	17-Nov-2012, 09:21	0.10	2.50	265 00	1 00	
VR82 C SMM	17-Nov-2012, 09 23	0.08	1.51	214 00	1 00	
VR82 D SMM	17-Nov-2012, 09:24	0.11	1.66	312 00	1 00	
VR82 E SMM	17-Nov-2012, 09.26	0 15	0.65	428.00	1.00	
VR82 F SMM	17-Nov-2012, 09:28	0.16	0 78	453 00	1.00	
VR82 G SMM	17-Nov-2012, 09.29	0.13	0.84	355.00	1.00	
VR82 H SMM	17-Nov-2012, 09:31	0.12	0.60	343 00	1 00	
VR82 I SMM	17-Nov-2012, 09.32	0 12	0.86	328.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:34	3.56	0.61	9900.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09.36	0.00	42.80	6.11	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 MB1 SMM	17-Nov-2012, 09:38	-0.00	64.10	-2.94	1.00	
VR30 MB1SPK SMM	17-Nov-2012, 09:39	1.82	0.61	5060.00	1.00	
VR30 A SMM	17-Nov-2012, 09:41	0.92	0.74	2550.00	1.00	
VR30 ADUP SMM	17-Nov-2012, 09:43	0.93	0.60	2590.00	1.00	
VR30 ASPK SMM	17-Nov-2012, 09:44	1.78	0.74	4940.00	1.00	
VR30 B SMM	17-Nov-2012, 09:46	0.58	0.75	1620 00	1.00	
VR30 C SMM	17-Nov-2012, 09:47	0.68	0.60	1890.00	1 00	
VR30 D SMM	17-Nov-2012, 09:49	0.80	0 75	2230.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 09:51:06
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 E SMM	17-Nov-2012, 09:51	0.55	0.51	1540.00	1.00	
VR30 F SMM	17-Nov-2012, 09.52	0 67	0.54	1860 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09.54	3.71	0.80	10300 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:56	-0.00	235.00	-1 21	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 G SMM	17-Nov-2012, 09:57	0.82	0.55	2280.00	1.00	
VR30 H SMM	17-Nov-2012, 09.59	0 58	0.47	1610.00	1.00	
VR30 I SMM	17-Nov-2012, 10.00	0.60	1.07	1670 00	1 00	
VR30 J SMM	17-Nov-2012, 10:02	0.53	3.49	1480 00	1.00	
VR30 K SMM	17-Nov-2012, 10:04	0 67	0.52	1870 00	1.00	
VR30 L SMM	17-Nov-2012, 10:05	0.81	0.51	2260.00	1.00	
VR36 MB1 SMM	17-Nov-2012, 10:07	0.00	24.00	6.55	1 00	
VR36 MB1SPK SMM	17-Nov-2012, 10:08	1.89	0.89	5240.00	1.00	
VR36 A SMM	17-Nov-2012, 10.10	0.77	0.47	2130.00	1 00	
VR36 ADUP SMM	17-Nov-2012, 10:12	0.74	0.37	2050 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10.13	3.72	0 44	10300.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10 15	0 00	103.00	2 91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 ASPK SMM	17-Nov-2012, 10:17	1.72	0.45	4770.00	1.00	
VR36 B SMM	17-Nov-2012, 10:18	2 59	0 47	7210.00	1 00	
VR36 C SMM	17-Nov-2012, 10:20	1 64	0.64	4540 00	1.00	
VR36 D SMM	17-Nov-2012, 10:22	1.79	0.44	4980.00	1.00	
VR36 E SMM	17-Nov-2012, 10:23	0.37	0.51	1040.00	1.00	
VR36 F SMM	17-Nov-2012, 10:25	0.18	0.87	511 00	1.00	
VR36 G SMM	17-Nov-2012, 10.26	0.13	0.85	371.00	1.00	
VR36 H SMM	17-Nov-2012, 10:28	1.34	0.57	3710.00	1 00	
VR36 I SMM	17-Nov-2012, 10:30	1.20	0.50	3330 00	1 00	
VR36 J SMM	17-Nov-2012, 10:31	1.04	0 35	2890.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10.33	3.66	0.32	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:34	-0.00	6.61	-7.46	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 K SMM	17-Nov-2012, 10:36	2.70	0.46	7500.00	1.00	
VR36 L SMM	17-Nov-2012, 10:38	0.27	0.35	752.00	1.00	
VR35 MB1 SMM	17-Nov-2012, 10:39	0.00	17.80	8.76	1 00	
VR35 MB1SPK SMM	17-Nov-2012, 10:41	1.84	0 58	5120.00	1.00	
VR35 A SMM	17-Nov-2012, 10:43	0 34	0.50	941 00	1.00	
VR35 ADUP SMM	17-Nov-2012, 10.44	0.34	0 37	935 00	1 00	
VR35 ASPK SMM	17-Nov-2012, 10.46	1.29	0 57	3580.00	1.00	
VR35 B SMM	17-Nov-2012, 10:48	0.42	0.73	1160.00	1.00	
VR35 C SMM	17-Nov-2012, 10:49	0 07	1.65	193.00	1.00	
VR35 D SMM	17-Nov-2012, 10:51	0.06	0.49	162 00	1 00	

11/23/12

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0 50 PPB
Calibration Standard #3 Conc.:	1 00 PPB
Calibration Standard #4 Conc.:	2 00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 . 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: 3MM Instrument: CETAC
Analyst: DM Date: 11-16-12
Bath Temp: 95°C Start Time: 1213 End Time: 1243

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2992-7	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	56-18	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I7633 H_2SO_4: I7677 HCl: —

5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

Prep Code: TLM Digested 20.0mL Instrument: CETAC
Analyst: DM Date: 11-15-12
Bath Temp: 95°C Start Time: 1247 End Time: 1447

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	2992-8	0.02	↓	0.02	1
STD2	↓	0.05	↓	0.05	1
STD3	↓	0.10	↓	0.1	1
STD4	↓	0.20	↓	0.2	1
STD5	↓	~~0.50~~ 0.4	↓	0.4	1
STD6	↓	1.00	↓	1.00	1
CRA	↓	0.02	↓	0.02	1
ICB/CCB	—	0.00	↓	0.0	1
ICV/LCS	2992-9	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO_3: I7633 H_2SO_4: I7677 HCl: —

5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM Matrix: SOIL
Analyst: NB Date: 11-13-12
Bath Temp: 91°C Start Time: 1253 End Time: 1323

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR30 A	1	—	0.726	50.0	1 (11-13)	YES	
" ADUP	1	—	0.726	↓	1	↓	
" ASPK	1	—	0.724		1		
" B	1	—	0.740		1		
" C	1	—	0.740		1		
" D	1	—	0.706		1		
" E	1	—	0.740		1		
" F	1	—	0.716		1		
" G	1	—	0.740		1		
" H	1	—	0.711		1		
" I	1	—	0.714		1		
" J	1	—	0.723		1		
" K	1	—	0.725		1		
" L	1	—	0.730		1		
" MBI	—	—	—	↓	1		
" MBISPK	—	—	—	50.0	1	↓	

NB 11-13 12

Chemical/Reagent ID:

HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 1205258

VR30 : 88893

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR30

Soil Conductivity - pH

Date: 10/13/2012

meter: Orion Model 115

Analyst: KE 10:58

Conductivity Calibration

Potassium Chloride standard *ARI ID =* **N / A**

Conductivity =	**1413**	*µS/cm*
Cal Temp	**N / A**	
Input Value		*µS/cm*

pH Calibration *Temperature (°C)* 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer		pH
Source	**FISHER#**	**7.00**

Conductivity Verification Standard

Source: **N / A**

Record Certified Values

µS / cm = **1000**

TDS (mg/l) =

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			21.5	7.03			*OK@ 100.4%*
VQ56 A1	10	20	20.4	6.33			
VQ56 A1 dup	10	20	20.4	6.36			*pH RPD =0.47%*
VQ56 B1	10	20	20.6	5.88			
VR66 A1	20	20	20.5	5.06			
VR66 B1	20	20	20.2	5.68			
VR66 C1	20	20	20.4	5.51			
VR66 D1	20	20	20.1	5.39			
VR66 E1	20	20	20.2	5.11			
VR66 F1	20	20	20.4	4.37			
VR66 G1	20	20	20.4	5.30			
pH 7 Buffer			21.5	7.04			*OK@ 100.6%*
VR66 H1	20	20	20.2	5.07			
VR66 I 1	20	20	20.3	4.43			
VR66 I 1 dup	20	20	20.3	4.41			*pH RPD =0.45%*
VR66 J 1	20	20	20.2	5.30			
VR02 A3	20	20	20.2	7.55			
VR02 A3 dup	20	20	20.2	7.59			*pH RPD =0.53%*
VR85 A2	20	20	20.3	4.46			
VR85 B2	20	20	20.3	3.35			
VR85 C2	20	20	20.5	3.57			
VR85 D2	20	20	20.5	3.54			
pH 7 Buffer			21.8	7.03			*OK@ 100.4%*
VR85 E2	20	20	20.5	3.78			
VR85 F2	20	20	20.5	3.50			
VR85 G4	20	20	20.6	5.42			
VR85 G4 dup	20	20	20.8	5.45			*pH RPD =0.55%*
VR85 H2	20	20	20.8	5.65			
VR85 I 2	20	20	20.8	5.73			
VR85 J 2	20	20	20.8	5.56			
VR85 K2	20	20	20.7	5.36			
VR85 L2	20	20	20.6	5.74			
VR85 M2	20	20	20.6	6.18			
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR84 A2	20	20	20.6	6.36			
VR84 B2	20	20	20.9	6.46			
VR84 C2	20	20	21.0	5.63			
VR84 D2	20	20	20.9	5.38			
VR84 D2 dup	20	20	20.7	5.34			*pH RPD =0.75%*
VR84 E2	20	20	20.7	4.82			
VR84 F2	20	20	20.8	5.34			

VR84 G2	20	20	20.7	5.56			
VR30 A1	10	20	20.8	5.83			
VR30 A1 dup	10	20	20.8	5.86			*pH RPD =0.51%*
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR30 B1	20	20	20.8	5.91			
VR30 C1	10	20	20.7	5.90			
VR30 D1	10	20	20.8	6.06			
VR30 E1	20	20	20.7	6.06			
VR30 F1	20	20	20.8	6.10			
VR30 G1	20	20	20.8	6.24			
VR30 H1	20	20	20.9	5.84			
VR30 I 1	20	20	21.0	5.87			
VR30 J 1	20	20	20.8	5.56			
VR30 K1	20	20	20.8	5.90			
pH 7 Buffer			21.7	7.05			*OK@ 100.7%*
VR30 L1	20	20	20.8	5.68			
VR31 A1	20	20	20.9	5.69			
VR31 B1	20	20	20.8	5.65			
VR31 C1	20	20	20.7	5.73			
VR31 D1	20	20	20.7	5.60			
VR31 E1	20	20	20.9	5.34			
VR31 F1	20	20	20.8	5.48			
VR31 G1	20	20	20.8	5.94			
VR31 H1	20	20	20.9	6.11			
VR31 I 1	20	20	20.9	5.22			
pH 7 Buffer			21.7	7.04			*OK@ 100.6%*
VR31 J 1	20	20	20.9	5.65			
VR31 K1	20	20	21.0	5.85			
VR31 L1	20	20	21.0	5.80			
VR32 A1	20	20	21.0	6.26			
VR32 A1 dup	20	20	21.0	6.24			*pH RPD =0.32%*
VR32 B1	20	20	21.2	5.27			
VR32 C1	20	20	21.1	5.97			
VR32 D1	20	20	21.0	5.58			
VR32 E1	20	20	21.1	6.26			
VR32 F1	20	20	21.1	5.87			
pH 7 Buffer			21.3	7.02			*OK@ 100.3%*
VR32 G1	20	20	21.1	5.69			
VR32 H1	20	20	21.0	5.80			
VR32 I 1	20	20	20.9	5.91			
VR32 J 1	20	20	20.9	5.89			
VR32 K1	20	20	21.0	6.58			
VR32 L1	10	20	20.9	5.63			
VR85 N1	20	20	20.7	6.74			
pH 7 Buffer			21.6	7.04			*OK@ 100.6%*

(1) 11-13-12 (W)

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (1)

Analyst: (W) 19:58

Conductivity Calibration

Potassium Chloride standard ARI ID = _____

Conductivity =	1413	µS/cm
Cal Temp		
Input Value		µS/cm

pH Calibration Temperature (°C) 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer	pH
Source FISHER#	7.00

Conductivity Verification Standard

Source: _____

Record Certified Values

µS / cm = 1000

TDS (mg/l) = _____

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			21.5	7.03			
UQS6 A1	10	20	20.4	6.33			
nPA1	10	20	20.4	6.36			
B1	10	20	20.6	5.88			
UR66 A1		20.5	~~20.0~~ (1)	5.06			
B1			20.2	5.68			
C1			20.4	5.51			
D1			20.1	5.39			
E1			20.2	5.41			
F1			20.4	4.37			
G1			20.4	5.30			
pH 7 Buffer		21.5	~~20.0~~ (1)	7.04			
UR66 H1			20.2	5.07			
I1			20.3	4.43			
nPJ1			20.3	4.41			
J1			20.2	5.30			
UR02 A3			20.2	2.55			
nPA3			20.2	2.59			
UR85 A2			20.3	4.44			
B2			20.3	3.35			
C2			20.5	3.57			
D2			20.5	~~20.5~~	3.54		
pH 7 Buffer		21.8	(1) ~~20~~	7.03			
UR85 E2			20.5	3.78			
F2			20.5	3.50			
G2		20.6	~~8.8~~ (1)	~~20.6~~	5.42		
nPG2			20.8	5.45			
H2			20.8	5.65			
I2			20.8	5.73			
J2			20.8	5.56			
K2			20.7	5.36			
L2			20.6	5.74			
M2			20.6	6.18			
pH 7 Buffer			21.4	7.05			

Page 1 of 2

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (W) 10:58

Analyst: (W)

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
VR84 A2			20.6	6.36			
B2			20.9	6.46			
C2			21.0	5.63			
D6			20.9	5.38			
MD D6			20.7	5.34			
E2			20.7	4.82			
F2			20.8	5.34			
G2			20.7	5.56			
VR30 A1	10	20	20.8	5.83			
MD A1	10	20	20.8	5.86			
pH 7 Buffer			21.4	~~7.10~~ (1) 7.05			
VR30 B1			20.8	5.91			
C1	10	20	20.7	5.80			
D1	10	20	20.8	6.06			
E1			20.7	6.06			
F1			20.8	6.10			
G1			20.8	6.24			
H1			20.9	5.84			
I1			21.0	5.87			
J1			20.9	5.56			
K1			20.8	5.90			
pH 7 Buffer			21.7	7.05			
VR30 L1			20.8	7.68			
VR31 A1			20.9	5.69			
B1			20.8	5.65			
C1			20.7	5.73			
D1			20.7	5.60			
E1			20.9	5.34			
F1			20.8	5.48			
G1			20.8	5.94			
H1			20.9	6.11			
I1			20.9	5.22			
pH 7 Buffer			21.7	7.04			
VR31 J1			20.9	5.65			
K1		21.0	~~21.0~~ (1)	5.85			
L1			21.0	5.80			
VR32 A1			21.0	6.26			
MD A1			21.0	6.24			
B1			21.2	5.27			
C1			21.1	5.97			
D1			21.0	5.58			
E1			21.1	6.26			
F1			21.1	5.87			
pH 7 Buffer			21.3	7.02			
VR32 G1			21.1	5.69			
H1			21.0	5.80			
I1			20.9	5.91			
J1			20.9	5.89			
K1			21.0	6.58			
(2) L1	10	20	20.9	5.63			
~~VR33 A1~~							
~~MD A1~~			11-13-12 (W)				
~~B1~~							
~~C1~~							
pH 7 Buffer			21.6	7.04			

(2) VR85 N1 - 20 - 20 - 20.7 - 6.74 (W) 11-13-12 (W)

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Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca	1205264	2.00	21.6
Analyst:	(W)		4.00	Fisher	108305	4.00	21.4
			7.00	Ricca	206053	7.01	21.6
			10.00	Fisher	116346	10.05	21.4
			12.00	Ricca	1206157	11.97	21.3
			Verification	Fisher	120143	7.03	21.5

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
(W)	10:58	ICV	7.03	7.03			21.5
		VQ56A'	6.33	6.33			20.4
		DUPA'	6.35	6.36			20.4
		B'	5.88	5.88			20.6
		VR66A'	5.06	5.06			20.5
		B'	5.67	5.68			20.2
		C'	5.56	5.57			20.4
		D'	5.39	5.39			20.1
		E'	5.11	5.11			20.2
		F'	4.35	4.37			20.4
		G'	5.30	5.30			20.4
		CCV	7.04	7.04			21.5
		VR66H'	5.06	5.07			20.2
		I	4.43	4.43			20.3
		DUPI	4.40	4.41			20.3
		J'	5.30	5.30			20.2
		VR02A3	7.55	7.55			20.2
		DUPA3	7.58	7.59			20.2
		VR85A2	4.46	4.46			20.3
		B2	3.35	3.35			20.3
		C2	3.57	3.57			20.5
		D2	3.54	3.54			20.5
		CCV	7.04	7.03			21.8

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Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10.42		2.00	Ricca			
Analyst:	W		4.00	Fisher			
			7.00	Ricca		cont'd	
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
W	10:58	~~VR85 rev~~ E[2]	3.77	3.78			20.5
		F[2]	3.50	3.50			20.5
		G[4]	5.40	5.42			20.6
		mG[4]	5.45	5.45			20.8
		H[2]	5.65	5.65			20.8
		I[2]	5.75	5.73			20.8
		J[2]	5.56	556			20.8
		K[2]	5.34	536			20.7
		L[2]	5.75	5.74			20.6
		M[2]	6.19	6.18			20.6
			W	11-13-12			
		CCV	7.05	7.05			21.4
		VR84 A[2]	(D) 6.37	6.36			20.6
		B[2]	6.46	6.46			20.9
		C[2]	5.63	5.63			21.0
		D[6]	5.38	5.38			20.9
		mD[6]	5.31	5.34			20.7
		E[2]	4.81	4.82			20.7
		F[2]	5.34	5.34			20.8
		G[2]	5.54	556			20.7
		VR30 A[2]	5.82	5.83			20.8
		mA[2]	5.84	5.86			20.8
		CCV	7.04	7.05			21.4

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(2) 7.05 11-13-12 (4)

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	10-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(W)		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	~~Fisher~~			

Cont

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W)	10:58	~~UR30~~ ~~ICV~~ B'	5.90	5.91			20.8
		C'	5.91	5.90			20.7
		D'	6.05	6.06			20.8
		E'	6.06	6.06			20.7
		F' ~~(6)~~	6.10	6.10			20.8
		G'	6.24	6.24			20.8
		H'	5.84	5.84			20.9
		I'	5.87	5.87			21.0
		J'	5.57	5.56			20.8
		K'	5.89	5.90			20.8
		CCV'	~~5.66~~ (2)	7.05			(1) ~~20.8~~ 21.7
	UR30	~~UR30~~ ~~CCV~~ L'	5.67	5.68			20.8
		UR31 A'	5.69	5.69			20.9
		B'	5.65	5.65			20.8
		C'	5.72	5.73			20.7
		D	5.60	5.60			20.7
		E'	5.34	5.34			20.9
		F'	5.48	5.48			20.8
		G'	5.93	(1) ~~5.95~~ 5.94			20.8
		H'	6.11	6.11			20.9
		I'	5.22	5.22			20.9
		~~(3)~~ ~~CCV~~	7.05	7.04			21.7
		UR31 ~~CCV~~ J'	5.65	5.65			20.9

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pH Logbook

Meter ID: Accumet AR60

(1) 11-13-12 (W)

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(W)		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

cont

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W) ~~VR31 K1~~	10:58	~~VR31 K1~~ ~~ICV~~	5.85	5.85			21.0
		L1	5.79	5.80			21.0
		VR32 A	6.26	6.26			21.0
		DDA	6.25	6.24			21.0
		B'	5.27	5.27			21.2
		C'	5.97	5.97			21.1
		D'	5.59	5.58			21.0
		E'	6.26	6.26			21.1
		F'	5.87	5.87			21.1
		CCV G'	7.01	7.02			21.3
		VR32 H' G'	5.70	5.69			21.1
		~~CCV~~ H'	6.80	5.80			21.0
		I'	5.89	5.96			20.9
		J'	5.89	5.89			20.9
		K'	6.58	6.58			21.0
		L'	5.63	5.63			20.9
(2)		CCV	7.04	7.04			21.1

11-13-12 (W)

ccv

(2) - N - 20 - 20 - 20.7 6.74

11-13-12 (W)

VR32 · 060342

w
11-19-

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 11/12/12 (B)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE / CDE 18:31

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
12/12/2012 18:31	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
11/13/2012 9:58	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	-704.5	< 12 hr		*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	11/2/12 17:04 KE	11/12/12 14:54 CDE	11/13/12 10:04 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1174	1.1174			0.00							
VR30 A1		6.1530	1.0703	5.5249			4.45	87.6%						
VR30 A1 dup		6.1198	1.0919	5.4725			4.38	87.1%						
							RPD =	0.59%				RPD =	NA	
VR30 A1 trp		6.1464	1.0779	5.4745			4.40	88.7%						
							RSD =	0.52%				RSD =	NA	
VR30 B1		6.1096	1.1116	5.8337			4.72	94.6%						
VR30 C1		6.0701	1.1040	5.8570			4.75	95.7%						
VR30 D1		6.1431	1.1085	5.7694			4.66	92.6%						
VR30 E1		6.6949	1.1327	6.4812			5.35	96.2%						
VR30 F1		6.0421	1.1042	5.8159			4.71	95.4%						
VR30 G1		6.8592	1.0974	6.6230			5.53	96.9%						
VR30 H1		6.1359	1.0803	5.8588			4.78	94.5%						
VR30 I 1		6.1013	1.0884	5.7598			4.67	93.2%						
VR30 J 1		6.1918	1.1133	5.8347			4.72	93.0%						
VR30 K1		6.2462	1.0855	5.9847			4.90	94.9%						
VR30 L1		6.2209	1.1079	5.9622			4.85	94.9%						
VR31 A1		6.2559	1.0667	6.0809			5.01	96.8%						
VR31 B1		6.1677	1.1092	5.9519			4.84	95.7%						
VR31 C1		6.3234	1.0985	6.1734			5.07	97.1%						
VR31 D1		6.7723	1.1009	6.7066			5.61	98.8%						
VR31 E1		6.5613	1.0772	6.4706			5.39	98.3%						
VR31 F1		6.4908	1.0944	6.3871			5.29	98.1%						
VR31 G1		6.2512	1.0979	6.1170			5.02	97.4%						
VR31 H1		6.3758	1.1077	6.2340			5.13	97.3%						

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(1) 11-12-12 (2) (3)

Analyst:		Date:	11-12-12	Oven ID:		Balance ID:	1123230597
Time in Oven:	1631	Time Out of Oven:	9:58	Elapsed Time (> 12 Hrs):			

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight ≤ 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		11-12-12 17:04	11-12-12 14:59	11-13-12 10:04						
Cal Weight (10.0000):		10.0000 (N)	10.0000 (N)	10.0000 (N)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	∅	1.1174	1.1174						
VR30 A'	2	6.1530	1.0703	5.5249						
A' dup	3	6.1198	1.0919	5.4725						
A' TM	4	6.1464	1.0779	5.4745						
B'	5	6.1096	1.1116	5.8337						
C'	6	6.0701	1.1040	5.8570						
D'	7	6.1431	1.1085	5.7694						
E'	8	6.0649	1.1327	6.4812						
F'	9	6.0421	1.1042	5.8159						
G'	10	6.8592	1.0974	6.6230						
H'	11	6.1391	1.0803	5.8588						
I'	12	6.1013	1.0884	5.7598						
J'	13	6.1918	1.1133	5.8347						
K'	14	6.2462	1.0855	5.9847						
L'	15	6.2209	1.1079	5.9622						
VR31 A'	16	6.2559	1.0667	6.0809						
B'	17	6.1677	1.1092	~~5.44~~ (1)	5.9519					
C'	18	6.3234	1.0985	6.1734						
D'	19	6.7723	1.1009	6.7066						
E'	20	6.5613	1.0772	~~6.46~~ (1)	6.4706					
F'	21	6.4908	1.0944	6.3871						
G'	22	6.2512	1.0979	6.1170						
H'	23	6.3758	1.1077	6.2340						

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE: 11/12/12 (B)

ANALYST: KE / CDE 18:53

HCL 10% ID:

HCL ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1683		13.1685	0.2 mg	
VR30 A1		-	13.2074	17.3347	17.0939	94.17%	
VR30 A1 dup		-	13.1083	17.2122	17.1241	97.85%	RPD = 3.84%
VR30 A1 trip		-	13.1459	17.3641	16.9674	90.60%	RSD = 3.85%
VR30 B1		-	13.1293	17.6899	17.7141	100.53%	
VR30 C1		-	13.0490	17.5506	17.6279	101.72%	
VR30 D1		-	13.1461	18.2240	18.1329	98.21%	
VR30 E1		-	13.0436	17.9537	18.0756	102.48%	
VR30 F1		-	13.1430	18.2113	18.2997	101.74%	
VR30 G1		-	13.0864	18.9620	19.0435	101.39%	
VR30 H1		-	13.1554	17.5039	17.5577	101.24%	
VR30 I 1		-	13.1993	17.0175	17.0326	100.40%	
VR30 J 1		-	13.1696	17.7972	17.7721	99.46%	
VR30 K1		-	13.1039	17.6271	17.6699	100.95%	
VR30 L1		-	13.1256	17.2390	17.2893	101.22%	
VR31 A1		-	13.1452	17.0154	17.1665	103.90%	
VR31 B1		-	13.1833	17.4122	17.4960	101.98%	
VR31 C1		-	13.1045	18.2654	18.3876	102.37%	
VR31 D1		-	13.1074	18.1418	18.3490	104.12%	
VR31 E1		-	13.1775	17.6402	17.8336	104.33%	
VR31 F1		-	13.1765	18.0827	18.2781	103.98%	
VR31 G1		-	13.1175	18.2475	18.3839	102.66%	
VR31 H1		-	13.1499	17.3932	17.5268	103.15%	

(1) 11-12-12 (W)

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) / CWL (1) B Date 11-12-12 18:53

Sample Idenification		IC Test	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID		Tare	Wet	70 °C		
Blank			13.1683	Ø	13.1685		
VR30A		–	13.2074	17.3347	17.0939		
A' dp		–	13.1083	17.2122	17.1241		
A' TP		–	13.1459	17.3641	16.9674		
B'		–	13.1293	17.6899	17.7141		
C'		–	13.0490	17.5506	17.6279		
D'		–	13.1461	18.2240	18.1329		
E'		–	13.0436	17.9537	18.0756		
F'		–	13.1430	18.2113	18.2997		
G'		–	13.0864	18.9620	19.0435		
H'		–	13.1554	17.5039	17.5577		
I'		–	13.1993	17.0175	17.0326		
J'		–	13.1696	17.7972	17.7721		
K'		–	13.1039	17.6271	17.6699		
L'		–	13.1256	17.2390	17.2893		
VR31A'		–	13.1452	17.0154	17.1665		
B'		–	13.1833	17.4122	17.4960		
C'		–	13.1045	18.2654	18.3876		
D'		–	13.1074	18.1418	18.3490		
E'		–	13.1775	~~17.64~~ (1)	17.6402	17.8336	
F'		–	13.1765	18.0827	18.2781		
G'		–	13.1175	18.2475	18.3839		
H'		–	13.1499	17.3932	17.5268		
				11-12-12 (W)			

6061F
TOC Solids Preparation Log

Revision 003
10/7/06

W
11-21-12

TOC, Solids Data Analysis

DATE: 11/19/2012
ANALYST: KE 11:26

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 11/13/2012 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00130-01 *Curve Date:* 11/13/12
CalFact: 1.339E+05 *intercept:* 163305 *r2 :* 0.99851
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard Source: *ERA# 0409-12-01* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
39.1	36.9	40.7				38.9	5.0%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	995	995	99.50%
Blank				1.00		40.0	-25.06	-25	Blank OK
NIST 1941B				1.00		1.8	28726	28,726	96.07%
~~VR30 A1~~				~~1.00~~		~~0.9~~	~~72036~~	~~72,036~~	~~Range OK!~~
Silica Blanks 1				1.00		46.4	39.09	39	Low Scale
Silica Blanks 2				1.00		49.4	36.89	37	Low Scale
Silica Blanks 3				1.00		47.9	40.74	41	Low Scale
~~VR30 A1~~	~~10.8~~	~~107.7~~	~~89.97%~~	~~9.97~~		~~1.8~~	~~11758~~	~~116,904~~	~~Range OK!~~
VR30 A1 dup	10.8	106.6	89.87%	9.87		2.0	7740	76,052	RPD=15.4%
VR30 A1	10.8	107.7	89.97%	9.97		1.8	8933	88,733	Range OK!
VR30 A1 trp	10.6	105.7	89.97%	9.97		1.9	7484	74,279	RSD=9.9%
VR30 A1 ms	10.8	107.7	89.97%	9.97	10	1.8	21817	217,215	Range OK!
Spike = *0.025*		*mg C to*	*0.2*	*mg samp=*	*138,503*	*ppm*		*93%*	
CCV				1.00		40.0	1027	1,027	102.70%
Blank				1.00		40.0	-22.7	-23	Blank OK
VR30 B1	10.8	107.3	89.93%	9.94		2.0	5247	51,782	Range OK!
VR30 C1	11.6	115.2	89.93%	9.93		1.8	5576	55,028	Range OK!
VR30 D1				1.00		1.3	37043	37,043	Range OK!

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike (µL Std)	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor		Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
VR30 E1				1.00		1.0	23695	23,695	*Range OK!*
VR30 F1				1.00		1.0	22632	22,632	*Range OK!*
VR30 G1				1.00		1.3	14198	14,198	*Range OK!*
VR30 H1				1.00		1.4	27740	27,740	*Range OK!*
VR30 I 1	17.4	167.9	89.64%	9.65		2.1	8186	78,954	*Range OK!*
VR30 J 1				1.00		1.1	44437	44,437	*Range OK!*
VR30 K1				1.00		0.9	46608	46,608	*Range OK!*
CCV				1.00		40.0	1030	1,030	*103.00%*
Blank				1.00		40.0	-19.56	-20	*Blank OK*
VR30 L1				1.00		0.9	74306	74,306	*Range OK!*
VR31 A1				1.00		0.9	36516	36,516	*Range OK!*
VR31 B1				1.00		0.8	31963	31,963	*Range OK!*
VR31 C1				1.00		1.3	22442	22,442	*Range OK!*
VR31 D1				1.00		1.4	13252	13,252	*Range OK!*
VR31 E1				1.00		1.4	19815	19,815	*Range OK!*
VR31 F1				1.00		0.9	18796	18,796	*Range OK!*
NIST 1941B				1.00		1.9	27919	27,919	*93.37%*
CCV				1.00		40.0	990	990	*99.00%*
Blank				1.00		40.0	-25.66	-26	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 11-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler		
Standards:	Source		Conc (ppm)		Analyst:	(W)
Calibration:	ARI – 00128-03		5000		Date:	11-19-12
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS		Time:	11:26
SRM:	NBS (1941b) or 8704		Method: PSEP 1986-MOD		Balance ID	B1464541145
Sample Sequence:						

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941B			1.8			
VR30 A'			0.9			
SB 1			4.0 (1)	46.4		
2			49.4			
3			47.9			
VR3D A'	10.8	107.7	1.8 ~~1.8~~			
DA'	10.8	106.6	(2) ~~2.8~~ ~~1.8~~ 2.0			
A	10.8	~~105.7~~ (2)	1.8			
RA'	10.8	107.7	1.9			
MSA'	10.8	107.7	1.8	2500	10	
CCV			40			
CCB			40			
VR30 B'	10.9	107.3	2.0			
C'	11.6	115.2	1.8			
D'			1.3			
E'			1.0			
F'			1.0			
G'			1.3			
H'			1.4			
I'	17.4	167.9	2.1			
J'			1.1			
K'			0.9			
CCV			40			
CCB			40			
VR30 L'			0.9			
VR31 A'			0.9			
B'			0.8			
C'			1.3			
D'			1.4			
E'			1.4			

(2) 107.7 11-19-12 (W)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 11-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler		
Standards:	Source		Conc (ppm)		Analyst:	(W)
Calibration:	ARI – 00128-03		5000		Date:	11-19-21
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS		Time:	11:26
SRM:	NBS – 1941b or 8704		Method: PSEP 1986-MOD		Balance ID	B146454MS
Sample Sequence:						

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
UR31 F1			0.9			
NBS 1941B			1.9			
CCV			40			
CCB			40			

12-19-12 (W)

11-19-12 (W)

Detailed Analysis Report Print Date/Time: 2012/11/19 18:18:42

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191125
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:28
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	994.6886	39.7875	5490744	7.950	8.949	149

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191137
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:41
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-25.0553	-1.0022	29112	7.656	7.497	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11191148
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:56
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28726.4668	51.7076	7086811	7.311	8.307	208

11-19-12 (W)

Sample ID: VR30 A1 Mode: TOC
Method: Boat Sampler Filename: 11191208
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	72035.9688	64.8324	8680871	6.760	7.757	162

Sample ID: Silica Blank 1 Mode: TOC
Method: Boat Sampler Filename: 11191222
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:24
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	39.0902	1.8138	242861	6.616	7.610	63

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 11191233
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:35
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36.8937	1.8225	244034	6.606	7.600	62

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 11191245
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:47
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	40.7419	1.9515	261305	6.519	7.514	61

Sample ID: VR30 A1 Mode: TOC
Method: Boat Sampler Filename: 11191255
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:58
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11758.1504	21.1647	2833889	6.264	7.263	129

Sample ID: VR30 A1 DUP Mode: TOC
Method: Boat Sampler Filename: 11191309
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7739.8589	15.4797	2072690	6.120	7.119	117

Sample ID: VR30 A1 [redacted] Mode: TOC
Method: Boat Sampler Filename: 11191318
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8933.0498	16.0795	2152998	6.064	7.064	115

Sample ID: VR30 A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 11191328
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:31
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7483.5659	14.2188	1903854	5.973	6.971	118

Sample ID: VR30 A1 MS Mode: TOC
Method: Boat Sampler Filename: 11191335
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:39
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21816.9043	39.2704	5258199	6.125	7.124	137

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191348
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:52
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1026.7412	41.0696	5662414	5.843	6.839	149

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191359
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 14:00
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-22.6996	-0.9080	41729	6.015	7.012	44

Sample ID: VR30 B1 Mode: TOC
Method: Boat Sampler Filename: 11191438
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 14:41
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5247.3013	10.4946	1405197	5.899	6.898	93

Sample ID: VR30 B1 Mode: TOC
Method: Boat Sampler Filename: 11191505
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:08
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5576.4346	10.0376	1344004	6.056	7.056	97

Sample ID: VR30 D1 Mode: TOC
Method: Boat Sampler Filename: 11191511
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37042.5742	48.1553	6447864	5.974	6.970	150

Sample ID: VR30 E1 Mode: TOC
Method: Boat Sampler Filename: 11191520
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:23
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23695.1934	23.6952	3172719	5.952	6.952	125

Sample ID: VR30 F1 Mode: TOC
Method: Boat Sampler Filename: 11191529
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:33
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22632.4707	22.6325	3030423	5.865	6.863	124

Sample ID: VR30 G1 Mode: TOC
Method: Boat Sampler Filename: 11191537
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:40
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14197.8115	18.4572	2471361	5.818	6.817	116

Sample ID: VR30 H1 Mode: TOC
Method: Boat Sampler Filename: 11191544
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:52
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27740.2910	38.8364	5200084	5.798	6.794	141

Sample ID: VR30 I 1 Mode: TOC
Method: Boat Sampler Filename: 11191557
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8186.2295	17.1911	2301837	5.717	6.715	112

Sample ID: VR30 J1 Mode: TOC
Method: Boat Sampler Filename: 11191617
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	44436.9062	48.8806	6544973	5.609	6.607	154

Sample ID: VR30 K1 Mode: TOC
Method: Boat Sampler Filename: 11191624
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	46608.0195	41.9472	5616613	5.656	6.655	146

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191632
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:37
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1030.3511	41.2140	5681749	5.673	6.669	151

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191640
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:42
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-19.5554	-0.7822	58569	5.721	6.719	52

Sample ID: VR30 H1 Mode: TOC
Method: Boat Sampler Filename: 11191647
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:52
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	74305.9609	66.8754	8954422	5.520	6.517	179

Sample ID: VR31 A1 Mode: TOC
Method: Boat Sampler Filename: 11191656
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:59
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36516.0469	32.8644	4400455	5.618	6.615	130

Sample ID: VR31 B1 Mode: TOC
Method: Boat Sampler Filename: 11191703
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:07
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31962.8496	25.5703	3423788	5.557	6.555	127

Sample ID: VR31 C1 Mode: TOC
Method: Boat Sampler Filename: 11191711
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22442.2266	29.1749	3906436	5.557	6.552	137

Sample ID: VR31 D1 Mode: TOC
Method: Boat Sampler Filename: 11191725
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:28
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13252.1279	18.5530	2484191	5.643	6.641	116

Sample ID: VR31 E1 Mode: TOC
Method: Boat Sampler Filename: 11191734
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:37
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19815.1465	27.7412	3714468	5.757	6.755	127

Sample ID: VR31 F1 Mode: TOC
Method: Boat Sampler Filename: 11191746
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:50
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18796.1211	16.9165	2265072	5.750	6.747	117

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11191754
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:59
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27919.2168	53.0465	7266082	5.781	6.780	219

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191803
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 18:10
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	989.5170	39.5807	5463046	5.798	6.796	149

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11191812
Timestamp: 2012/11/19 18:17
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-25.6550	-1.0262	25900	5.805	5.834	120

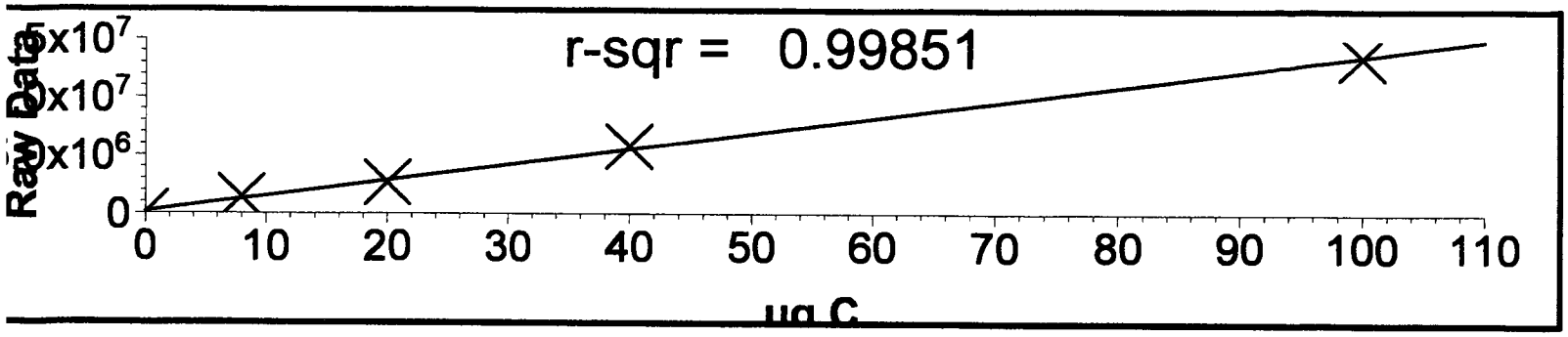
Last Message: Low Sample Detected

11-13-12 (W)

Calibration Report Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID: 11132012 BOAT CAL
Created: 2012/11/13 17:59
Calibration Factor (m): 1.339e+05
Y Intercept (b): 163305
r-squared: 0.99851

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46


r-sqr = 0.99851
Raw Data
5x10^7
4x10^7
3x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/11/13 18:00:30

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131156
Timestamp: 2012/11/13 12:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 34152 Std Dev: 13649 RSD: 39.96

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131238
Timestamp: 2012/11/13 13:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

<<<Statistics>>> Mean: 1702454 Std Dev: 978717 RSD: 57.49

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131440
Timestamp: 2012/11/13 15:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

<<<Statistics>>> Mean: 2675582 Std Dev: 260489 RSD: 9.74

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131526
Timestamp: 2012/11/13 15:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

<<<Statistics>>> Mean: 5317643 Std Dev: 38175 RSD: 0.72

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131539
Timestamp: 2012/11/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

<<<Statistics>>> Mean: 1402526 Std Dev: 274468 RSD: 19.57

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131603
Timestamp: 2012/11/13 16:30
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131635
Timestamp: 2012/11/13 16:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131653
Timestamp: 2012/11/13 17:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131715
Timestamp: 2012/11/13 17:46
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR30

ANALYTICAL
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INCORPORATED

ANALYST NOTES - GeoTech

ARI Job No: VR30 Client Name: Hart Crowser

Parameter: #10 screening Client Project: Upper Columbia

☐ Job OK, no corrective action required

Date Set Up 11/8/12

Air Dry Start 14:40 11/8/12

#10 Sieve 11/09/12

Analyst: gc Date Completed: 11/9/12

VR30 00362

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Project: 17800-36 Upper Columbia

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AN
Signature

November-29-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

November 28, 2012

Steve Hughes
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Upper Columbia 17800-36
ARI Job No. VR31

Dear Steve:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: eFile VR31

KFB/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VR31

VR31 2079

Sample Custody Record

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 17800-36 LAB NUMBER

PROJECT NAME Upper Columbia

HART CROWSER CONTACT Steve Hughes

SAMPLED BY: PRC, SMF, WOM, KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: Metals*	TOC	pH (EPA 9045)	Total solids (SM 2540G)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	SA1-FIELD DUPLICATE		10/30/12	1702	SOIL	X	X	X	X	1	
	SA2-1C		10/31/12	0957						1	
	SA2-2C			0930						1	
	SA2-2P-1 (0 to 3" depth)			1013						1	
	SA2-2P-2 (3 to 6" depth)			1018						1	
	SA2-2P-3 (6" to 12" depth)			1023						1	
	SA2-2P-4 (12 to 24" depth)			1028						1	
	SA2-3C			1516						1	
	SA2-4C			1200						1	
	SA2-5C			1323						1	
	SA2-6C			1344						1	
	SA2-7C			1455						1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Suzanne Fanbl	11/7/12	SIGNATURE: Amis Atwell	11-7-12
PRINT NAME: Suzanne Fanbl	TIME	PRINT NAME: Amis Atwell	TIME
COMPANY: Hart Crowser	0800	COMPANY: ARI	1130
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Metals - Ag, Al, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, Pb, K, Na, Sb, Sc, Ti, V, Zn (Method 6010B/6020) Hg by EPA 7471A

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. for Other Contract Requirements

12 TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☑ STANDARD
☐ 72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser

Project Name: Upper Columbia

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VR31

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	2.9 4.7 5.1 3.8	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by: CA Date: 11-07-12 Time: 1132

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

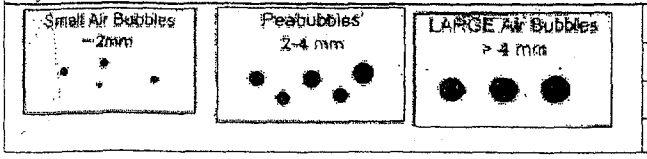
Samples Logged by: JM Date: 11/7/12 Time: 1316

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR31

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR31
November 28, 2012

Sample Receipt:

Please find enclosed the original chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted twelve soil samples in good condition on November 7, 2012. The samples were received with cooler temperatures between 2.9 and 5.1°C. Please see the Cooler Receipt Form for further details.

Total Metals by 200.8, 6010C and 7471A

The samples were digested on 11/13/12 and analyzed between 11/15/12 and 11/27/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): The method blank was free of contamination.

LCS: Is in control.

Matrix spike/Sample Duplicate/RPD: The percent recoveries for aluminum, antimony, lead, and manganese were not within control limits for the matrix spike associated with sample SA1-Field Duplicate. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that the sample matrix was the cause of the poor MS recoveries. No corrective actions were taken.

The RPD for nickel was not within control limits for the matrix duplicate associated with sample SA1-Field Duplicate. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that a lack of sample homogeneity was the cause of the high RPD. No corrective actions were taken.

Conventional Chemistry Parameters

The samples were analyzed between 11/12/12 and 11/21/12 within the method recommended holding times.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: There were no anomalies with these samples.

Method Blank(s): The method blanks were free of contamination.

ANALYTICAL
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INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR31
November 28, 2012

SRM/ LCS/ Sample Replicates: All percent recoveries and RPDs were in control.

Matrix spike: Is in control.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Hart Crowser, Inc.	**ARI Job No.:** VR31
Client Project: Upper Columbia	**Client Project No.:** 17800-36

Case Narrative

1. Twelve samples were received on November 7, 2012, and were in good condition.
2. The samples were submitted for separation of the less than 2mm material.
3. The samples were each placed in a clean tare and air-dried.
4. The samples were separated into two size fractions using a decontaminated, stainless steel #10 (2mm) sieve and sieve pan.
5. After separation, both size fractions were delivered to sample receiving for distribution.
6. There were no further anomalies in the samples or test method.

Released by: Gemma Curtis Date: 11/13/12
Title: *Geotechnical Division Manager*

Reviewed by: Date: 11.14.2012
Title: *Lead Technician*

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR31
Client: Hart Crowser Inc.
Project Event: 17800-36
Project Name: Upper Columbia

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SA1-Field Duplicate	VR31A	12-22177	Soil	10/30/12 17:02	11/07/12 11:30
2.	SA2-1C	VR31B	12-22178	Soil	10/31/12 09:57	11/07/12 11:30
3.	SA2-2C	VR31C	12-22179	Soil	10/31/12 09:30	11/07/12 11:30
4.	SA2-2P-1(0 to 3" depth)	VR31D	12-22180	Soil	10/31/12 10:13	11/07/12 11:30
5.	SA2-2P-2(3 to 6" depth)	VR31E	12-22181	Soil	10/31/12 10:18	11/07/12 11:30
6.	SA2-2P-3(6 to 12" depth)	VR31F	12-22182	Soil	10/31/12 10:23	11/07/12 11:30
7.	SA2-2P-4(12 to 24" depth	VR31G	12-22183	Soil	10/31/12 10:28	11/07/12 11:30
8.	SA2-3C	VR31H	12-22184	Soil	10/31/12 15:16	11/07/12 11:30
9.	SA2-4C	VR31I	12-22185	Soil	10/31/12 12:00	11/07/12 11:30
10.	SA2-5C	VR31J	12-22186	Soil	10/31/12 13:23	11/07/12 11:30
11.	SA2-6C	VR31K	12-22187	Soil	10/31/12 13:44	11/07/12 11:30
12.	SA2-7C	VR31L	12-22188	Soil	10/31/12 14:55	11/07/12 11:30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S — Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA — The flagged analyte was not analyzed for

NR — Spiked compound recovery is not reported due to chromatographic interference

NS — The flagged analyte was not spiked into the sample

M — Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 — The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N — The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y — The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC — Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C — The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P — The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X — Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z — Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A

Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[4]	Solids[3]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[5]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[5]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] **mg/kg**	**LOD**[1] **mg/kg**	**LOQ**[1] **mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] **mg/kg**	**LOD**[1] **mg/kg**	**LOQ**[1] **mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VR31

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SA1-Field Duplicat	VR31A	12-22177	
SA1-Field DuplicatD	VR31ADUP	12-22177	
SA1-Field DuplicatS	VR31ASPK	12-22177	
SA2-1C	VR31B	12-22178	
PBS	VR31MB1	12-22178	
LCSS	VR31MB1SPK	12-22178	
SA2-2C	VR31C	12-22179	
SA2-2P-1(0 to 3	VR31D	12-22180	
SA2-2P-2(3 to 6	VR31E	12-22181	
SA2-2P-3(6 to 12	VR31F	12-22182	
SA2-2P-4(12 to 24	VR31G	12-22183	
SA2-3C	VR31H	12-22184	
SA2-4C	VR31I	12-22185	
SA2-5C	VR31J	12-22186	
SA2-6C	VR31K	12-22187	
SA2-7C	VR31L	12-22188	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 4/27/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-Field Duplicate
SAMPLE

Lab Sample ID: VR31A
LIMS ID: 12-22177
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Percent Total Solids: 96.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	9.0	10	**26,600**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.088	0.2	**12.2**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.15	0.8	**426**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**1.0**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.9**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	4.8	10	**4,980**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**26.7**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**10.0**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**21.6**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	1.9	10	**24,900**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**51.2**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	3.5	10	**6,080**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.10	0.3	**957**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.050**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**26.5**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	44	130	**1,490**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0081	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	2.7	130	**170**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**33.8**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**133**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-Field Duplicate
DUPLICATE

Lab Sample ID: VR31A
LIMS ID: 12-22177
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Aluminum	6010C	26,600	27,200	2.2%	+/- 20%	
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	12.2	11.5	5.9%	+/- 20%	
Barium	6010C	426	428	0.5%	+/- 20%	
Beryllium	200.8	1.0	1.0	0.0%	+/- 0.2	L
Cadmium	200.8	0.9	0.9	0.0%	+/- 20%	
Calcium	6010C	4,980	4,800	3.7%	+/- 20%	
Chromium	200.8	26.7	29.9	11.3%	+/- 20%	
Cobalt	200.8	10.0	9.6	4.1%	+/- 20%	
Copper	200.8	21.6	22.0	1.8%	+/- 20%	
Iron	6010C	24,900	26,100	4.7%	+/- 20%	
Lead	200.8	51.2	49.0	4.4%	+/- 20%	
Magnesium	6010C	6,080	6,570	7.7%	+/- 20%	
Manganese	6010C	957	1,050	9.3%	+/- 20%	
Mercury	7471A	0.050	0.051	2.0%	+/- 20%	
Nickel	200.8	26.5	32.7	20.9%	+/- 20%	*
Potassium	6010C	1,490	1,370	8.4%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Sodium	6010C	170	150	12.5%	+/- 130	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Vanadium	200.8	33.8	32.6	3.6%	+/- 20%	
Zinc	200.8	133	132	0.8%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA1-Field Duplicate
MATRIX SPIKE

Lab Sample ID: VR31A
LIMS ID: 12-22177
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample		Spike Added	% Recovery	Q
Aluminum	6010C	26,600		27,000	203	197%	H
Antimony	200.8	0.2	U	1.2	25.3	4.7%	N
Arsenic	200.8	12.2		36.2	25.3	94.9%	
Barium	6010C	426		628	203	99.5%	
Beryllium	200.8	1.0		26.3	25.3	100%	
Cadmium	200.8	0.9		25.5	25.3	97.2%	
Calcium	6010C	4,980		5,820	1,020	82.4%	H
Chromium	200.8	26.7		48.2	25.3	85.0%	
Cobalt	200.8	10.0		32.7	25.3	89.7%	
Copper	200.8	21.6		48.2	25.3	105%	
Iron	6010C	24,900		24,700	203	-98.5%	H
Lead	200.8	51.2		79.6	25.3	112%	
Magnesium	6010C	6,080		6,930	1,020	83.3%	H
Manganese	6010C	957		1,150	50.8	380%	H
Mercury	7471A	0.050		0.111	0.0726	84.0%	
Nickel	200.8	26.5		51.2	25.3	97.6%	
Potassium	6010C	1,490		2,300	1,020	79.4%	
Selenium	200.8	0.5	U	74.9	80.9	92.6%	
Silver	200.8	0.2	U	22.0	25.3	87.0%	
Sodium	6010C	170		1,100	1,020	91.2%	
Thallium	200.8	0.2	U	25.2	25.3	99.6%	
Vanadium	200.8	33.8		59.0	25.3	99.6%	
Zinc	200.8	133		219	80.9	106%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA2-1C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR31B
LIMS ID: 12-22178
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 95.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.5	5	**21,600**	
3050B	11/13/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**16.2**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.059	0.3	**744**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.7**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**5.2**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**5,730**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**16.4**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**6.4**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**20.4**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.73	5	**20,800**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**248**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**4,470**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.039	0.1	**2,510**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.062**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**14.2**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**2,050**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**190**	
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.3**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**22.6**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	6.5	80	**490**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA2-2C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR31C
LIMS ID: 12-22179
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.4	5	**18,800**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**12.2**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.058	0.3	**344**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.0**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**4,150**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**31.7**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.5**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**17.5**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.73	5	**20,900**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**86.5**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**5,000**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.039	0.1	**1,090**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.040**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**20.7**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**1,630**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0079	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**220**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**33.8**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**254**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-2P-1(0 to 3" depth)
SAMPLE

Lab Sample ID: VR31D
LIMS ID: 12-22180
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 98.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.4	5	**13,200**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.081	0.2	**9.7**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.057	0.3	**216**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.4**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.011	0.09	**1.59**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**3,250**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.035	0.5	**23.1**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.030	0.2	**5.9**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.034	0.5	**11.2**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.71	5	**18,700**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.044	0.09	**44.1**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**4,920**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.038	0.09	**704**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.019**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.046	0.5	**13.7**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**1,370**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.092	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0075	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**220**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0028	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**26.5**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.32	4	**129**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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TOTAL METALS
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Sample ID: SA2-2P-2(3 to 6" depth)
SAMPLE

Lab Sample ID: VR31E
LIMS ID: 12-22181
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.5	5	**18,900**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**9.6**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.059	0.3	**361**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.8**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**3,650**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**26.4**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**8.5**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**15.4**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.73	5	**22,600**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**28.4**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**5,410**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.039	0.1	**721**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.025**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**18.4**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**1,730**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**200**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**30.9**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**139**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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TOTAL METALS
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Sample ID: SA2-2P-3(6 to 12" depth)
SAMPLE

Lab Sample ID: VR31F
LIMS ID: 12-22182
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 98.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	8.6	10	**20,700**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**9.7**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.15	0.7	**264**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.7**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.8**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	4.6	10	**3,740**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**28.8**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.6**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**22.5**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	1.8	10	**23,500**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**31.3**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	3.3	10	**5,990**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.097	0.2	**526**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.022**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**23.7**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	42	120	**1,620**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0079	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	2.6	120	**220**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**36.7**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**121**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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Sample ID: SA2-2P-4(12 to 24" depth)
SAMPLE

Lab Sample ID: VR31G
LIMS ID: 12-22183
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	8.7	10	**26,300**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**10.0**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.15	0.7	**315**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**1.0**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.8**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	4.6	10	**4,520**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**37.1**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.4**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**34.3**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	1.8	10	**26,800**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**26.0**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	3.4	10	**5,980**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.098	0.2	**1,450**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.029**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**30.5**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	43	120	**1,990**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0077	0.2	**0.5**	
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	2.6	120	**250**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**34.2**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**166**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

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TOTAL METALS
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Sample ID: SA2-3C
SAMPLE

Lab Sample ID: VR31H
LIMS ID: 12-22184
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.6	5	**15,900**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.088	0.2	**8.2**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.061	0.3	**321**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.9**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.9	5	**5,010**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**15.3**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**5.3**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**12.0**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.76	5	**18,300**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**107**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.4	5	**3,220**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.040	0.1	**818**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.030**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**14.3**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	18	50	**1,570**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0081	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.1	50	**180**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**17.5**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**130**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA2-4C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR31I
LIMS ID: 12-22185
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 98.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.4	5	**16,600**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**13.9**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.057	0.3	**264**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.4**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**3,370**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**17.3**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**6.9**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**11.9**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.71	5	**19,900**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**122**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**4,270**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.038	0.1	**1,240**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.033**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**13.5**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**1,900**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**180**	
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.2**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**30.1**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**180**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA2-5C
SAMPLE

Lab Sample ID: VR31J
LIMS ID: 12-22186
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 98.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	3.5	5	**11,200**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**7.4**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.059	0.3	**90.4**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.4**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.4**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	1.8	5	**7,760**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**20.6**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**6.8**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**19.5**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	0.73	5	**21,100**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**69.5**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	1.3	5	**5,620**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.039	0.1	**399**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.043**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**15.3**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	17	50	**1,320**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	1.0	50	**260**	
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**34.6**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**105**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-6C
SAMPLE

Lab Sample ID: VR31K
LIMS ID: 12-22187
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	8.4	10	**14,800**	
3050B	11/13/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.012	0.2	**0.2**	
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**22.7**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.14	0.7	**203**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**13.1**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	4.5	10	**5,940**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**48.6**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.4**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**30.4**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	1.8	10	**23,100**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.23	0.5	**405**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	3.3	10	**6,570**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.095	0.2	**702**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.066**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**26.3**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	41	120	**3,380**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	**7440-22-4**	**Silver**	0.0077	0.2	**0.2**	
3050B	11/13/12	6010C	11/14/12	**7440-23-5**	**Sodium**	2.5	120	**170**	
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.5**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**27.7**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	1.6	20	**520**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA2-7C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR31L
LIMS ID: 12-22188
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	**7429-90-5**	**Aluminum**	8.8	10	**21,100**	
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**17.7**	
3050B	11/13/12	6010C	11/14/12	**7440-39-3**	**Barium**	0.15	0.7	**209**	
3050B	11/13/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.9**	
3050B	11/13/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**3.2**	
3050B	11/13/12	6010C	11/14/12	**7440-70-2**	**Calcium**	4.7	10	**5,230**	
3050B	11/13/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**28.7**	
3050B	11/13/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**17.6**	
3050B	11/13/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**34.3**	
3050B	11/13/12	6010C	11/14/12	**7439-89-6**	**Iron**	1.9	10	**28,700**	
3050B	11/13/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**105**	
3050B	11/13/12	6010C	11/14/12	**7439-95-4**	**Magnesium**	3.4	10	**5,720**	
3050B	11/13/12	6010C	11/14/12	**7439-96-5**	**Manganese**	0.099	0.2	**1,120**	
CLP	11/13/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.041**	
3050B	11/13/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**41.2**	
3050B	11/13/12	6010C	11/14/12	**7440-09-7**	**Potassium**	43	120	**2,730**	
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0079	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	7440-23-5	Sodium	2.6	120	120	U
3050B	11/13/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.2**	
3050B	11/13/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**28.6**	
3050B	11/13/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**188**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VR31MB
LIMS ID: 12-22178
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/13/12	6010C	11/14/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/13/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/13/12	200.8	11/15/12	7440-41-7	Beryllium	0.018	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	11/13/12	6010C	11/14/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/13/12	200.8	11/15/12	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-48-4	Cobalt	0.032	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-50-8	Copper	0.036	0.5	0.5	U
3050B	11/13/12	6010C	11/14/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/13/12	200.8	11/15/12	7439-92-1	Lead	0.047	0.1	0.1	U
3050B	11/13/12	6010C	11/14/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/13/12	6010C	11/14/12	7439-96-5	Manganese	0.040	0.1	0.1	U
CLP	11/13/12	7471A	11/17/12	7439-97-6	Mercury	0.0004	0.007	0.007	U
3050B	11/13/12	200.8	11/15/12	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	11/13/12	6010C	11/14/12	7440-09-7	Potassium	17	50	50	U
3050B	11/13/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/13/12	200.8	11/15/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/13/12	6010C	11/14/12	7440-23-5	Sodium	1.1	50	50	U
3050B	11/13/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-62-2	Vanadium	0.017	0.2	0.2	U
3050B	11/13/12	200.8	11/15/12	7440-66-6	Zinc	0.34	4	4	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR31LCS
LIMS ID: 12-22178
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR31-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	204	200	102%	
Antimony	200.8	25.4	25.0	102%	
Arsenic	200.8	24.7	25.0	98.8%	
Barium	6010C	205	200	102%	
Beryllium	200.8	26.3	25.0	105%	
Cadmium	200.8	25.1	25.0	100%	
Calcium	6010C	994	1000	99.4%	
Chromium	200.8	26.5	25.0	106%	
Cobalt	200.8	26.2	25.0	105%	
Copper	200.8	26.1	25.0	104%	
Iron	6010C	208	200	104%	
Lead	200.8	27.2	25.0	109%	
Magnesium	6010C	1020	1000	102%	
Manganese	6010C	51.0	50.0	102%	
Mercury	7471A	0.130	0.143	90.9%	
Nickel	200.8	25.9	25.0	104%	
Potassium	6010C	980	1000	98.0%	
Selenium	200.8	78.6	80.0	98.2%	
Silver	200.8	24.2	25.0	96.8%	
Sodium	6010C	940	1000	94.0%	
Thallium	200.8	27.4	25.0	110%	
Vanadium	200.8	25.8	25.0	103%	
Zinc	200.8	82	80	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR31

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111471	2000.0	2002.03	**100.1**	2000.0	2024.56	**101.2**	2019.38	**101.0**	2064.84	**103.2**	2012.44	**100.6**	2065.14	**103.3**
Antimony	SB	PMS	MS111511	50.0	49.58	**99.2**	50.0	50.25	**100.5**	50.82	**101.6**	50.96	**101.9**	50.90	**101.8**		
Arsenic	AS	PMS	MS111511	50.0	49.14	**98.3**	50.0	49.58	**99.2**	48.12	**96.2**	49.70	**99.4**	48.61	**97.2**		
Barium	BA	ICP	IP111471	1000.0	1026.40	**102.6**	1000.0	1029.52	**103.0**	1032.71	**103.3**	1042.34	**104.2**	1017.52	**101.8**	1025.81	**102.6**
Beryllium	BE	PMS	MS111511	50.0	52.03	**104.1**	50.0	51.64	**103.3**	52.18	**104.4**	50.94	**101.9**	54.65	**109.3**		
Cadmium	CD	PMS	MS111511	50.0	49.59	**99.2**	50.0	50.91	**101.8**	51.07	**102.1**	50.40	**100.8**	51.00	**102.0**		
Calcium	CA	ICP	IP111471	2000.0	1928.49	**96.4**	2000.0	1961.60	**98.1**	1962.54	**98.1**	1987.07	**99.4**	1964.55	**98.2**	1998.07	**99.9**
Chromium	CR	PMS	MS111511	50.0	49.15	**98.3**	50.0	50.26	**100.5**	49.93	**99.9**	50.58	**101.2**	50.52	**101.0**		
Cobalt	CO	PMS	MS111511	50.0	50.76	**101.5**	50.0	51.79	**103.6**	50.52	**101.0**	51.00	**102.0**	51.84	**103.7**		
Copper	CU	PMS	MS111511	50.0	49.41	**98.8**	50.0	51.23	**102.5**	49.01	**98.0**	50.66	**101.3**	49.43	**98.9**		
Iron	FE	ICP	IP111471	2000.0	2035.24	**101.8**	2000.0	2071.15	**103.6**	2067.07	**103.4**	2154.82	**107.7**	2110.41	**105.5**	2154.29	**107.7**
Lead	PB	PMS	MS111511	50.0	51.24	**102.5**	50.0	51.29	**102.6**	50.89	**101.8**	51.46	**102.9**	51.50	**103.0**		
Magnesium	MG	ICP	IP111471	2000.0	2018.44	**100.9**	2000.0	2041.21	**102.1**	2039.55	**102.0**	2078.32	**103.9**	2035.35	**101.8**	2085.72	**104.3**
Manganese	MN	ICP	IP111471	1000.0	984.40	**98.4**	1000.0	996.90	**99.7**	997.55	**99.8**	1004.54	**100.5**	999.61	**100.0**	1004.42	**100.4**
Mercury	HG	CVA	HG111701	8.0	7.26	**90.8**	4.0	3.69	**92.3**	3.65	**91.3**	1.76	**44.0**	3.63	**90.8**	3.59	**89.8**
Nickel	NI	PMS	MS111511	50.0	49.09	**98.2**	50.0	50.47	**100.9**	48.27	**96.5**	49.43	**98.9**	48.80	**97.6**		
Potassium	K	ICP	IP111471	20000.0	19905.59	**99.5**	20000.0	20051.05	**100.3**	20032.59	**100.2**	19957.06	**99.8**	19712.11	**98.6**	19880.06	**99.4**
Selenium	SE	PMS	MS111511	80.0	76.84	**96.1**	50.0	49.83	**99.7**	48.32	**96.6**	50.16	**100.3**	49.16	**98.3**		
Silver	AG	PMS	MS111511	50.0	48.91	**97.8**	50.0	47.69	**95.4**	45.83	**91.7**	47.36	**94.7**	48.36	**96.7**		
Sodium	NA	ICP	IP111471	50000.0	48454.61	**96.9**	50000.0	48776.27	**97.6**	48757.37	**97.5**	48468.72	**96.9**	47986.91	**96.0**	48378.99	**96.8**
Thallium	TL	PMS	MS111511	50.0	52.26	**104.5**	50.0	51.73	**103.5**	51.44	**102.9**	52.64	**105.3**	52.48	**105.0**		
Vanadium	V	PMS	MS111511	50.0	50.37	**100.7**	50.0	49.83	**99.7**	48.87	**97.7**	49.80	**99.6**	50.19	**100.4**		
Zinc	ZN	PMS	MS111511	50.0	49.08	**98.2**	50.0	49.71	**99.4**	49.06	**98.1**	50.87	**101.7**	49.72	**99.4**		

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111471	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111471	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111471	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111471	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111471	2000.0												
Manganese	MN	ICP	IP111471	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.60	**90.0**	3.64	**91.0**	3.61	**90.3**	3.56	**89.0**	3.71	**92.8**	3.72	**93.0**
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111471	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Silver	AG	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111471	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Aluminum	AL	ICP	IP111471	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111471	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111471	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111471	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111471	2000.0												
Manganese	MN	ICP	IP111471	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.66	**91.5**	3.61	**90.3**	3.55	**88.8**	3.45	**86.3**	3.54	**88.5**	3.46	**86.5**
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111471	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Silver	AG	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111471	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV18	%R	CCV19	%R	CCV20	%R	CCV21	%R	CCV22	%R	CCV23	%R
Aluminum	AL	ICP	IP111471	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111471	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111471	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111471	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111471	2000.0												
Manganese	MN	ICP	IP111471	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.65	**91.3**	3.69	**92.3**	3.61	**90.3**	3.61	**90.3**	3.69	**92.3**	3.62	**90.5**
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111471	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Silver	AG	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111471	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV24	%R	CCV25	%R	CCV26	%R	CCV27	%R	CCV28	%R	CCV29	%R
Aluminum	AL	ICP	IP111471	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111471	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111471	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111471	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111471	2000.0												
Manganese	MN	ICP	IP111471	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.64	**91.0**										
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111471	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Silver	AG	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111471	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR31

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Aluminum	AL	ICP	IP111471	50.0	39.84	**79.7**	50.11	**100.2**								
Antimony	SB	PMS	MS111511	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS111511	0.2	0.19	**95.0**										
Barium	BA	ICP	IP111471	3.0	2.73	**91.0**	2.84	**94.7**								
Beryllium	BE	PMS	MS111511	0.2	0.22	**110.0**										
Cadmium	CD	PMS	MS111511	0.1	0.12	**120.0**										
Calcium	CA	ICP	IP111471	50.0	42.64	**85.3**	44.79	**89.6**								
Chromium	CR	PMS	MS111511	0.5	0.61	**122.0**										
Cobalt	CO	PMS	MS111511	0.2	0.21	**105.0**										
Copper	CU	PMS	MS111511	0.5	0.54	**108.0**										
Iron	FE	ICP	IP111471	50.0	41.35	**82.7**	48.67	**97.3**								
Lead	PB	PMS	MS111511	0.1	0.12	**120.0**										
Magnesium	MG	ICP	IP111471	50.0	47.76	**95.5**	50.72	**101.4**								
Manganese	MN	ICP	IP111471	1.0	0.99	**99.0**	1.31	**131.0**								
Mercury	HG	CVA	HG111701	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS111511	0.5	0.52	**104.0**										
Potassium	K	ICP	IP111471	500.0	484.49	**96.9**	479.27	**95.9**								
Selenium	SE	PMS	MS111511	0.5	0.58	**116.0**										
Silver	AG	PMS	MS111511	0.2	0.20	**100.0**										
Sodium	NA	ICP	IP111471	500.0	460.34	**92.1**	451.89	**90.4**								
Thallium	TL	PMS	MS111511	0.2	0.22	**110.0**										
Vanadium	V	PMS	MS111511	0.2	0.23	**115.0**										
Zinc	ZN	PMS	MS111511	4.0	4.42	**110.5**										

VR31.0074

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111471	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Barium	BA	ICP	IP111471	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Calcium	CA	ICP	IP111471	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Iron	FE	ICP	IP111471	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Magnesium	MG	ICP	IP111471	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111471	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Potassium	K	ICP	IP111471	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Silver	AG	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Sodium	NA	ICP	IP111471	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U		

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111471	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111471	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111471	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111471	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111471	5000.0	50.0												
Manganese	MN	ICP	IP111471	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111471	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Silver	AG	PMS	MS111511	10.0	0.2												
Sodium	NA	ICP	IP111471	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Aluminum	AL	ICP	IP111471	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111471	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111471	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111471	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111471	5000.0	50.0												
Manganese	MN	ICP	IP111471	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111471	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Silver	AG	PMS	MS111511	10.0	0.2												
Sodium	NA	ICP	IP111471	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB18	C	CCB19	C	CCB20	C	CCB21	C	CCB22	C	CCB23	C
Aluminum	AL	ICP	IP111471	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111471	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111471	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111471	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111471	5000.0	50.0												
Manganese	MN	ICP	IP111471	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111471	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Silver	AG	PMS	MS111511	10.0	0.2												
Sodium	NA	ICP	IP111471	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB24	C	CCB25	C	CCB26	C	CCB27	C	CCB28	C	CCB29	C
Aluminum	AL	ICP	IP111471	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111471	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111471	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111471	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111471	5000.0	50.0												
Manganese	MN	ICP	IP111471	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1												
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111471	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Silver	AG	PMS	MS111511	10.0	0.2												
Sodium	NA	ICP	IP111471	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

VR31 0001

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

ICS SOURCE: I.V.

RUNID: IP111471

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	197798.3	198887.8	**99.4**	198319.3	196405.5	**98.2**			
Antimony		1000	5.0	1025.9	**102.6**	4.3	1025.6	**102.6**			
Arsenic		1000	15.5	982.3	**98.2**	13.8	991.0	**99.1**			
Barium		1000	-3.1	1022.9	**102.3**	-4.1	1014.1	**101.4**			
Beryllium		1000	0.1	952.5	**95.3**	0.2	961.7	**96.2**			
Boron			-3.4	-3.5		-4.5	-4.4				
Cadmium		1000	-0.2	1014.6	**101.5**	-0.3	1018.1	**101.8**			
Calcium	100000	100000	98523.2	100123.4	**100.1**	100510.0	100836.9	**100.8**			
Chromium		1000	-0.3	1026.0	**102.6**	-1.1	1029.2	**102.9**			
Cobalt		1000	-0.6	985.0	**98.5**	-0.5	988.0	**98.8**			
Copper		1000	0.0	1031.8	**103.2**	-0.3	1023.3	**102.3**			
Iron	200000	200000	195344.7	197301.9	**98.7**	200713.7	200180.9	**100.1**			
Lead		1000	-0.5	962.8	**96.3**	-0.6	968.9	**96.9**			
Magnesium	100000	100000	102276.3	99906.2	**99.9**	104647.1	99915.0	**99.9**			
Manganese		1000	0.8	981.4	**98.1**	0.5	989.1	**98.9**			
Molybdenum			1.0	0.8		1.1	1.0				
Nickel		1000	0.4	930.4	**93.0**	-1.5	932.4	**93.2**			
Potassium			-15.1	-48.4		-1.6	-52.1				
Selenium		1000	16.9	971.9	**97.2**	13.8	985.3	**98.5**			
Silicon			-2.0	-3.0		-2.9	1.3				
Silver		1000	-1.1	980.1	**98.0**	-1.1	973.2	**97.3**			
Sodium			9.1	22.8		3.7	15.4				
Strontium			3.8	3.8		3.8	3.8				
Thallium		1000	-0.1	910.5	**91.1**	-0.9	908.2	**90.8**			
Tin			-12.8	-11.7		-12.7	-11.2				
Titanium			2.7	2.0		2.4	2.2				
Vanadium		1000	0.9	964.4	**96.4**	1.2	960.4	**96.0**			
Zinc		1000	4.5	928.5	**92.9**	4.5	939.9	**94.0**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

ICS SOURCE: I.V.

RUNID: MS111511

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.8	**99.0**						
Chromium		20	0.6	20.1	**100.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.9	20.6	**103.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	417.3	421.0	**105.3**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	20.3	**101.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	0.9	20.0	**100.0**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR31

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	SA1-Field Duplicat	VR31APOST	MS111511	448.78	B	1000.00	U	500	Soil	89.8

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: ICP

SDG: VR31

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Aluminum	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	104634.09		109691.20		4.8	
Barium	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	1678.89		1817.70		8.3	
Calcium	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	19605.85		20483.30	B	4.5	
Iron	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	97934.41		103573.20		5.8	
Magnesium	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	23948.50		24446.70	B	2.1	
Manganese	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	3770.81		3981.05		5.6	
Potassium	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	5859.90		6252.15	B	6.7	
Sodium	SA1-Field DuplicatL	VR31A-L	Soil	IP111471	652.37	B	2500.00	U	100.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR31

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	0.08	U	0.20	B		
Arsenic	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	12.01		12.10	B	0.7	
Beryllium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	1.02	B	1.10	B	7.8	
Cadmium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	0.87	B	1.05	B	20.7	
Chromium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	26.29		27.65	B	5.2	
Cobalt	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	9.82	B	10.35	B	5.4	
Copper	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	21.32	B	21.85	B	2.5	
Lead	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	50.48		51.80		2.6	
Nickel	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	26.09	B	27.00	B	3.5	
Selenium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	-0.23	U	0.25	B		
Silver	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	0.19	U	0.20	B		
Thallium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	0.17	U	0.20	B		
Vanadium	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	33.35	B	34.95	B	4.8	
Zinc	SA1-Field DuplicatL	VR31A-L	Soil	MS111511	130.81		135.20		3.4	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	4/1/2012	250000.0	7/30/2012
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

IEC DATE: 11/12/2012

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0581760	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1637240
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0091790	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0392710
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0130090
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0442360
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2393490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0412430
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5321920
Manganese	257.61	0.0046450	0.0000000	0.0000000	0.0000000	0.0019080	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054280
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0108090	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1069480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1236770	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0477260	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0349450
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR31

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0863140	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0084630	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1197150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-Field Duplicat	VR31A	1.021	0.0	50.0
SA1-Field DuplicatD	VR31ADUP	1.025	0.0	50.0
SA1-Field DuplicatS	VR31ASPK	1.020	0.0	50.0
SA2-1C	VR31B	1.072	0.0	50.0
SA2-2C	VR31C	1.065	0.0	50.0
SA2-2P-1(0 to 3	VR31D	1.069	0.0	50.0
SA2-2P-2(3 to 6	VR31E	1.046	0.0	50.0
SA2-2P-3(6 to 12	VR31F	1.053	0.0	50.0
SA2-2P-4(12 to 24	VR31G	1.052	0.0	50.0
SA2-3C	VR31H	1.018	0.0	50.0
SA2-4C	VR31I	1.071	0.0	50.0
SA2-5C	VR31J	1.042	0.0	50.0
SA2-6C	VR31K	1.077	0.0	50.0
SA2-7C	VR31L	1.035	0.0	50.0
PBS	VR31MB1	1.000	0.0	50.0
LCSS	VR31MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-Field Duplicat	VR31A	1.022	0.0	50.0
SA1-Field DuplicatD	VR31ADUP	1.025	0.0	50.0
SA1-Field DuplicatS	VR31ASPK	1.025	0.0	50.0
SA2-1C	VR31B	1.083	0.0	50.0
SA2-2C	VR31C	1.039	0.0	50.0
SA2-2P-1(0 to 3	VR31D	1.089	0.0	50.0
SA2-2P-2(3 to 6	VR31E	1.062	0.0	50.0
SA2-2P-3(6 to 12	VR31F	1.033	0.0	50.0
SA2-2P-4(12 to 24	VR31G	1.066	0.0	50.0
SA2-3C	VR31H	1.019	0.0	50.0
SA2-4C	VR31I	1.046	0.0	50.0
SA2-5C	VR31J	1.055	0.0	50.0
SA2-6C	VR31K	1.065	0.0	50.0
SA2-7C	VR31L	1.035	0.0	50.0
PBS	VR31MB1	1.000	0.0	50.0
LCSS	VR31MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 11/13/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA1-Field Duplicat	VR31A	0.710	0.0	50.0
SA1-Field DuplicatD	VR31ADUP	0.706	0.0	50.0
SA1-Field DuplicatS	VR31ASPK	0.714	0.0	50.0
SA2-1C	VR31B	0.730	0.0	50.0
SA2-2C	VR31C	0.728	0.0	50.0
SA2-2P-1(0 to 3	VR31D	0.737	0.0	50.0
SA2-2P-2(3 to 6	VR31E	0.715	0.0	50.0
SA2-2P-3(6 to 12	VR31F	0.732	0.0	50.0
SA2-2P-4(12 to 24	VR31G	0.733	0.0	50.0
SA2-3C	VR31H	0.728	0.0	50.0
SA2-4C	VR31I	0.719	0.0	50.0
SA2-5C	VR31J	0.731	0.0	50.0
SA2-6C	VR31K	0.733	0.0	50.0
SA2-7C	VR31L	0.748	0.0	50.0
PBS	VR31MB1	0.700	0.0	50.0
LCSW	VR31MB1SPK	0.700	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/14/2012

SDG: VR31 | RUNID: IP111471 | METHOD: ICP | END DATE: 11/14/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10434			X			X		X					X		X	X	X		X											
S2	S2	1.00	10475						X											X													
S3	S3	1.00	10500																														
S4	S4	1.00	10523																														
S5	S5	1.00	10544			X					X					X		X	X			X											
ICV	ICV	1.00	10584			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	11023			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	11074			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	11115			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	11161			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	11210			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	11261			X			X		X					X		X	X	X		X											
PBS	VR31MB1	2.00	11302			X			X		X					X		X	X	X		X											
ZZZZZZ	VQ47E	1.00	11344																														
ZZZZZZ	ZZZZZZ	10.00	11384																														
SA1-Field Duplicat	VR31A	2.00	11424																														
SA1-Field DuplicatD	VR31ADUP	2.00	11462																														
SA1-Field DuplicatS	VR31ASPK	2.00	11502																														
ZZZZZZ	ZZZZZZ	2.00	11533																														
SA2-1C	VR31B	2.00	11563			X			X		X					X		X	X	X		X											
SA2-2C	VR31C	2.00	12002			X			X		X					X		X	X	X		X											
LCSS	VR31MB1SPK	2.00	12040			X			X		X					X		X	X	X		X											
CCV	CCV2	1.00	12080			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	12130			X			X		X					X		X	X	X		X											
SA2-2P-1(0 to 3	VR31D	2.00	12171			X			X		X					X		X	X	X		X											
SA2-2P-2(3 to 6	VR31E	2.00	12211			X			X		X					X		X	X	X		X											
SA2-2P-3(6 to 12	VR31F	2.00	12250																														
SA2-2P-4(12 to 24	VR31G	2.00	12285																														
SA2-3C	VR31H	2.00	12325			X			X		X					X		X	X	X		X											
SA2-4C	VR31I	2.00	12363			X			X		X					X		X	X	X		X											
SA2-5C	VR31J	2.00	12402			X			X		X					X		X	X	X		X											
SA2-6C	VR31K	2.00	12442																														
SA2-7C	VR31L	2.00	12482																														
CCV	CCV3	1.00	12521			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	12570			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

INSTRUMENT ID: OPTIMA ICP 2

RUNID: IP111471

METHOD: ICP

START DATE: 11/14/2012

END DATE: 11/14/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA1-Field DuplicatL	VR31A-L	25.00	13033			X			X		X					X		X	X	X		X											
SA1-Field Duplicat	VR31A	5.00	13073			X			X		X					X		X	X	X		X											
SA1-Field DuplicatD	VR31ADUP	5.00	13113			X			X		X					X		X	X	X		X											
SA1-Field DuplicatS	VR31ASPK	5.00	13153			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	5.00	13191																														
SA2-2P-3(6 to 12	VR31F	5.00	13230			X			X		X					X		X	X	X		X											
SA2-2P-4(12 to 24	VR31G	5.00	13270			X			X		X					X		X	X	X		X											
SA2-6C	VR31K	5.00	13310			X			X		X					X		X	X	X		X											
SA2-7C	VR31L	5.00	13350			X			X		X					X		X	X	X		X											
CCV	CCV4	1.00	13390			X			X		X					X		X	X	X		X											
CCB	CCB4	1.00	13441			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	13482			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	13524			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	13565			X			X		X					X		X	X	X		X											
CCV	CCV5	1.00	14004			X			X		X					X		X	X	X		X											
CCB	CCB5	1.00	14053			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: NEXION 300D MS START DATE: 11/15/2012

SDG: VR31 RUNID: MS111511 METHOD: PMS END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11590		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S1	S1	1.00	12030		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S2	S2	1.00	12070		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S3	S3	1.00	12110		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S4	S4	1.00	12160		X		X			X		X	X	X	X								X	X	X	X				X		X	X
S5	S5	1.00	12220																														
ZZZZZZ	Rinse sampl	1.00	12290																														
ZZZZZZ	ZZZZZZ	1.00	12370																														
ICV	MICV	1.00	12450		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICB	ICB	1.00	12540		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV1	1.00	12580		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB1	1.00	13050		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CRI	MCRI	1.00	13090		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICSA	ICSAI	1.00	13130		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ICSAB	ICSABI	1.00	13190		X		X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	LR200	1.00	13260																														
ZZZZZZ	LR300	1.00	13330																														
ZZZZZZ	B1	1.00	13400																														
ZZZZZZ	B2	1.00	13460																														
ZZZZZZ	B3	1.00	13520																														
CCV	MCCV2	1.00	13560		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB2	1.00	14030		X		X			X		X	X	X	X								X	X	X	X				X		X	X
PBS	VR31MB1	20.00	14070		X		X			X		X	X	X	X								X	X	X	X				X		X	X
LCSS	VR31MB1SPK	20.00	14110		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-Field DuplicatL	VR31A-L	100.00	14160		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-Field Duplicat	VR31A	20.00	14200		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-Field DuplicatD	VR31ADUP	20.00	14240		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-Field DuplicatS	VR31ASPK	20.00	14280		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA1-Field DuplicatA	VR31APOST	20.00	14320																						X								
SA2-2C	VR31C	20.00	14360		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-2P-1(0 to 3	VR31D	20.00	14410		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-2P-2(3 to 6	VR31E	20.00	14450		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV3	1.00	14500		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB3	1.00	14560		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-5C	VR31J	20.00	15150		X		X			X		X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR31 | RUNID: MS111511 METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA2-2P-3(6 to 12	VR31F	20.00	15190		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-3C	VR31H	20.00	15240		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-6C	VR31K	100.00	15280																					X									X
SA2-6C	VR31K	20.00	15320		X		X			X		X	X	X	X								X		X	X				X		X	
SA2-7C	VR31L	20.00	15360		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-4C	VR31I	20.00	15420		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-2P-4(12 to 24	VR31G	20.00	15460		X		X			X		X	X	X	X								X	X	X	X				X		X	X
SA2-1C	VR31B	400.00	15500																														X
SA2-1C	VR31B	20.00	15540		X		X			X		X	X	X	X								X	X	X	X				X		X	
CCV	MCCV4	1.00	15580		X		X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB4	1.00	16050		X		X			X		X	X	X	X								X	X	X	X				X		X	X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	06462														X																
S0.1	S0.1	1.00	06475														X																
S0.5	S0.5	1.00	06493														X																
S1	S1	1.00	06511														X																
S2	S2	1.00	06524														X																
S5	S5	1.00	06542														X																
S10	S10	1.00	06560														X																
ICV	AICV	1.00	07050														X																
ICB	ICB	1.00	07063														X																
CCV	ACCV1	1.00	07081														X																
CCB	CCB1	1.00	07095														X																
CRA	CRA	1.00	07113														X																
ZZZZZZ	VS18MB1	1.00	07130																														
ZZZZZZ	VS18MB1SPK	1.00	07144																														
ZZZZZZ	VS18A	1.00	07161																														
ZZZZZZ	VS18ADUP	1.00	07175																														
ZZZZZZ	VS18ASPK	1.00	07193																														
ZZZZZZ	VS18B	1.00	07210																														
ZZZZZZ	VS18C	1.00	07224																														
ZZZZZZ	VS18D	1.00	07242																														
ZZZZZZ	VS18E	1.00	07260																														
CCV	ACCV2	1.00	07274														X																
CCB	CCB2	1.00	07292														X																
ZZZZZZ	VS18F	1.00	07310																														
ZZZZZZ	VS18G	1.00	07323																														
ZZZZZZ	VS18H	1.00	07341																														
ZZZZZZ	VS18I	1.00	07354																														
ZZZZZZ	VS18J	1.00	07372																														
ZZZZZZ	VS18K	1.00	07385																														
ZZZZZZ	VS18L	1.00	07403																														
ZZZZZZ	VR37MB1	1.00	07421																														
ZZZZZZ	VR37MB1SPK	1.00	07434																														
ZZZZZZ	VR37A	1.00	07452																														
CCV	ACCV3	1.00	07470														X																
CCV	ACCV4	1.00	07584														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701

METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	08002														X																
ZZZZZZ	VS18F	1.00	08020																														
ZZZZZZ	VS18G	1.00	08033																														
ZZZZZZ	VS18H	1.00	08051																														
ZZZZZZ	VS18I	1.00	08064																														
ZZZZZZ	VS18J	1.00	08082																														
ZZZZZZ	VS18K	1.00	08095																														
ZZZZZZ	VS18L	1.00	08113																														
ZZZZZZ	VR37MB1	1.00	08131																														
ZZZZZZ	VR37MB1SPK	1.00	08144																														
ZZZZZZ	VR37A	1.00	08162																														
CCV	ACCV5	1.00	08180														X																
CCB	CCB4	1.00	08194														X																
ZZZZZZ	VR37ADUP	1.00	08212																														
ZZZZZZ	VR37ASPK	1.00	08230																														
ZZZZZZ	VR37B	1.00	08243																														
ZZZZZZ	VR37C	1.00	08261																														
ZZZZZZ	VR37D	1.00	08274																														
ZZZZZZ	VR37E	1.00	08292																														
ZZZZZZ	VR37F	1.00	08310																														
ZZZZZZ	VR37G	1.00	08323																														
ZZZZZZ	VR37H	1.00	08341																														
ZZZZZZ	VR37I	1.00	08355																														
CCV	ACCV6	1.00	08373														X																
CCB	CCB5	1.00	08391														X																
ZZZZZZ	VR37J	1.00	08404																														
ZZZZZZ	VR37K	1.00	08422																														
ZZZZZZ	VR37L	1.00	08440																														
ZZZZZZ	VR37M	1.00	08454																														
ZZZZZZ	VR37N	1.00	08472																														
ZZZZZZ	VR37O	1.00	08485																														
ZZZZZZ	VR58MB1	1.00	08503																														
ZZZZZZ	VR58MB1SPK	1.00	08520																														
ZZZZZZ	VR58A	1.00	08534																														
ZZZZZZ	VR58ADUP	1.00	08552																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR31 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	08565														X																
CCB	CCB6	1.00	08584														X																
ZZZZZZ	VR58ASPK	1.00	09001																														
ZZZZZZ	VR58B	1.00	09015																														
ZZZZZZ	VR58C	1.00	09033																														
ZZZZZZ	VR58D	1.00	09051																														
ZZZZZZ	VR58E	1.00	09065																														
ZZZZZZ	VR58F	1.00	09082																														
ZZZZZZ	VR58G	1.00	09100																														
ZZZZZZ	VR58H	1.00	09114																														
ZZZZZZ	VR58I	1.00	09131																														
ZZZZZZ	VR58J	1.00	09145																														
CCV	ACCV8	1.00	09163														X																
CCB	CCB7	1.00	09181														X																
ZZZZZZ	VR82A	1.00	09195																														
ZZZZZZ	VR82B	1.00	09213																														
ZZZZZZ	VR82C	1.00	09230																														
ZZZZZZ	VR82D	1.00	09244																														
ZZZZZZ	VR82E	1.00	09262																														
ZZZZZZ	VR82F	1.00	09280																														
ZZZZZZ	VR82G	1.00	09294																														
ZZZZZZ	VR82H	1.00	09311																														
ZZZZZZ	VR82I	1.00	09325																														
CCV	ACCV9	1.00	09343														X																
CCB	CCB8	1.00	09361														X																
ZZZZZZ	VR30MB1	1.00	09382																														
ZZZZZZ	VR30MB1SPK	1.00	09395																														
ZZZZZZ	VR30A	1.00	09413																														
ZZZZZZ	VR30ADUP	1.00	09430																														
ZZZZZZ	VR30ASPK	1.00	09444																														
ZZZZZZ	VR30B	1.00	09461																														
ZZZZZZ	VR30C	1.00	09475																														
ZZZZZZ	VR30D	1.00	09492																														
ZZZZZZ	VR30E	1.00	09510																														
ZZZZZZ	VR30F	1.00	09524																														

VR31 09524

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR31

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV10	1.00	09542														X																
CCB	CCB9	1.00	09560														X																
ZZZZZZ	VR30G	1.00	09574																														
ZZZZZZ	VR30H	1.00	09592																														
ZZZZZZ	VR30I	1.00	10005																														
ZZZZZZ	VR30J	1.00	10023																														
ZZZZZZ	VR30K	1.00	10040																														
ZZZZZZ	VR30L	1.00	10054																														
ZZZZZZ	VR36MB1	1.00	10072																														
ZZZZZZ	VR36MB1SPK	1.00	10085																														
ZZZZZZ	VR36A	1.00	10103																														
ZZZZZZ	VR36ADUP	1.00	10121																														
CCV	ACCV11	1.00	10134														X																
CCB	CCB10	1.00	10152														X																
ZZZZZZ	VR36ASPK	1.00	10170																														
ZZZZZZ	VR36B	1.00	10184																														
ZZZZZZ	VR36C	1.00	10202																														
ZZZZZZ	VR36D	1.00	10220																														
ZZZZZZ	VR36E	1.00	10234																														
ZZZZZZ	VR36F	1.00	10251																														
ZZZZZZ	VR36G	1.00	10265																														
ZZZZZZ	VR36H	1.00	10282																														
ZZZZZZ	VR36I	1.00	10300																														
ZZZZZZ	VR36J	1.00	10314																														
CCV	ACCV12	1.00	10331														X																
CCB	CCB11	1.00	10345														X																
ZZZZZZ	VR36K	1.00	10363																														
ZZZZZZ	VR36L	1.00	10381																														
ZZZZZZ	VR35MB1	1.00	10395																														
ZZZZZZ	VR35MB1SPK	1.00	10413																														
ZZZZZZ	VR35A	1.00	10431																														
ZZZZZZ	VR35ADUP	1.00	10444																														
ZZZZZZ	VR35ASPK	1.00	10462																														
ZZZZZZ	VR35B	1.00	10480																														
ZZZZZZ	VR35C	1.00	10493																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR31 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR35D	1.00	10511																														
CCV	ACCV13	1.00	10525														X																
CCB	CCB12	1.00	10543														X																
ZZZZZZ	VR35E	1.00	10561																														
ZZZZZZ	VR35F	1.00	10574																														
ZZZZZZ	VR35G	1.00	10592																														
ZZZZZZ	VR35H	1.00	11010																														
ZZZZZZ	VR35I	1.00	11024																														
ZZZZZZ	VR35J	1.00	11042																														
ZZZZZZ	VR35K	1.00	11060																														
ZZZZZZ	VR35L	1.00	11073																														
CCV	ACCV14	1.00	11091														X																
CCB	CCB13	1.00	11110														X																
ZZZZZZ	VR32MB1	1.00	11130																														
ZZZZZZ	VR32MB1SPK	1.00	11143																														
ZZZZZZ	VR32A	1.00	11161																														
ZZZZZZ	VR32ADUP	1.00	11174																														
ZZZZZZ	VR32ASPK	1.00	11192																														
ZZZZZZ	VR32B	1.00	11210																														
ZZZZZZ	VR32C	1.00	11223																														
ZZZZZZ	VR32D	1.00	11241																														
ZZZZZZ	VR32E	1.00	11255																														
ZZZZZZ	VR32F	1.00	11272																														
CCV	ACCV15	1.00	11290														X																
CCB	CCB14	1.00	11304														X																
ZZZZZZ	VR32G	1.00	11322																														
ZZZZZZ	VR32H	1.00	11340																														
ZZZZZZ	VR32I	1.00	11354																														
ZZZZZZ	VR32J	1.00	11371																														
ZZZZZZ	VR32K	1.00	11385																														
ZZZZZZ	VR32L	1.00	11402																														
ZZZZZZ	VR65MB1	1.00	11420																														
ZZZZZZ	VR65MB1SPK	1.00	11434																														
ZZZZZZ	VR65A	1.00	11451																														
ZZZZZZ	VR65ADUP	1.00	11465																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia　　INSTRUMENT ID: CETAC MERCURY　　START DATE: 11/17/2012

SDG: VR31　　RUNID: HG111701　　METHOD: CVA　　END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV16	1.00	11483														X																
CCB	CCB15	1.00	11501														X																
ZZZZZZ	VR65ASPK	1.00	11515																														
ZZZZZZ	VR65B	1.00	11533																														
ZZZZZZ	VR65C	1.00	11550																														
ZZZZZZ	VR65D	1.00	11564																														
ZZZZZZ	VR65E	1.00	11582																														
ZZZZZZ	VR65F	1.00	11595																														
ZZZZZZ	VR65G	1.00	12013																														
ZZZZZZ	VR65H	1.00	12031																														
ZZZZZZ	VR65I	1.00	12044																														
ZZZZZZ	VR65J	1.00	12062																														
CCV	ACCV17	1.00	12080														X																
CCB	CCB16	1.00	12094														X																
ZZZZZZ	VR65K	1.00	12112																														
ZZZZZZ	VR65L	1.00	12125																														
ZZZZZZ	VR38MB1	1.00	12143																														
ZZZZZZ	VR38MB1SPK	1.00	12161																														
ZZZZZZ	VR38A	1.00	12175																														
ZZZZZZ	VR38ADUP	1.00	12193																														
ZZZZZZ	VR38ASPK	1.00	12211																														
ZZZZZZ	VR38B	1.00	12224																														
ZZZZZZ	VR38C	1.00	12242																														
ZZZZZZ	VR38D	1.00	12255																														
CCV	ACCV18	1.00	12273														X																
CCB	CCB17	1.00	12291														X																
ZZZZZZ	VR38E	1.00	12305																														
ZZZZZZ	VR38F	1.00	12323																														
ZZZZZZ	VR38G	1.00	12341																														
ZZZZZZ	VR38H	1.00	12354																														
ZZZZZZ	VR38I	1.00	12372																														
ZZZZZZ	VR38J	1.00	12390																														
ZZZZZZ	VR38K	1.00	12404																														
CCV	ACCV19	1.00	12422														X																
CCB	CCB18	1.00	12440														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR31 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR33MB1	1.00	12462																														
ZZZZZZ	VR33MB1SPK	1.00	12480																														
ZZZZZZ	VR33A	1.00	12493																														
ZZZZZZ	VR33ADUP	1.00	12511																														
ZZZZZZ	VR33ASPK	1.00	12524																														
ZZZZZZ	VR33B	1.00	12542																														
ZZZZZZ	VR33C	1.00	12555																														
ZZZZZZ	VR33D	1.00	12573																														
ZZZZZZ	VR33E	1.00	12591																														
ZZZZZZ	VR33F	1.00	13005																														
CCV	ACCV20	1.00	13022														X																
CCB	CCB19	1.00	13041														X																
ZZZZZZ	VR33G	1.00	13054																														
ZZZZZZ	VR33H	1.00	13072																														
ZZZZZZ	VR33I	1.00	13090																														
ZZZZZZ	VR33J	1.00	13103																														
ZZZZZZ	VR33K	1.00	13121																														
ZZZZZZ	VR33L	1.00	13134																														
ZZZZZZ	VR34MB1	1.00	13152																														
ZZZZZZ	VR34MB1SPK	1.00	13170																														
ZZZZZZ	VR34A	1.00	13183																														
ZZZZZZ	VR34ADUP	1.00	13201																														
ZZZZZZ	ACCV21	1.00	13215																														
CCB	CCB20	1.00	13233														X																
ZZZZZZ	VR34ASPK	1.00	13251																														
ZZZZZZ	VR34B	1.00	13265																														
ZZZZZZ	VR34C	1.00	13283																														
ZZZZZZ	VR34D	1.00	13300																														
ZZZZZZ	VR34E	1.00	13314																														
ZZZZZZ	VR34F	1.00	13332																														
ZZZZZZ	VR34G	1.00	13345																														
ZZZZZZ	VR34H	1.00	13363																														
ZZZZZZ	VR34I	1.00	13380																														
ZZZZZZ	VR34J	1.00	13394																														
CCV	ACCV22	1.00	13412														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR31 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB21	1.00	13430														X																
ZZZZZZ	VR34K	1.00	13444																														
ZZZZZZ	VR34L	1.00	13462																														
PBW	VR31MB1	1.00	13475														X																
LCSW	VR31MB1SPK	1.00	13493														X																
SA1-Field Duplicat	VR31A	1.00	13511														X																
SA1-Field DuplicatD	VR31ADUP	1.00	13525														X																
SA1-Field DuplicatS	VR31ASPK	1.00	13543														X																
SA2-1C	VR31B	1.00	13560														X																
SA2-2C	VR31C	1.00	13574														X																
SA2-2P-1(0 to 3	VR31D	1.00	13592														X																
CCV	ACCV23	1.00	14005														X																
CCB	CCB22	1.00	14023														X																
SA2-2P-2(3 to 6	VR31E	1.00	14041														X																
SA2-2P-3(6 to 12	VR31F	1.00	14055														X																
SA2-2P-4(12 to 24	VR31G	1.00	14073														X																
SA2-3C	VR31H	1.00	14091														X																
SA2-4C	VR31I	1.00	14104														X																
SA2-5C	VR31J	1.00	14122														X																
SA2-6C	VR31K	1.00	14140														X																
SA2-7C	VR31L	1.00	14154														X																
CCV	ACCV24	1.00	14172														X																
CCB	CCB23	1.00	14190														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: VR31

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/30/12
Date Received: 11/07/12

Client ID: SA1-Field Duplicate
ARI ID: 12-22177 VR31A

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.69
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	96.60
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	3.93

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-1C
ARI ID: 12-22178 VR31B

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.65
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.70
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	6.60

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-2C
ARI ID: 12-22179 VR31C

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.73
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.10
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	2.37

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-2P-1(0 to 3" depth)
ARI ID: 12-22180 VR31D

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.60
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.80
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	1.40

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-2P-2(3 to 6" depth)
ARI ID: 12-22181 VR31E

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.34
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.30
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	2.10

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-2P-3(6 to 12" depth)
ARI ID: 12-22182 VR31F

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.48
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.10
Total Organic Carbon	11/19/12 111912#1	Plumb,1981	Percent	0.020	1.99

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-2P-4(12 to 24" depth)
ARI ID: 12-22183 VR31G

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.94
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.40
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	1.45

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-3C
ARI ID: 12-22184 VR31H

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.11
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.30
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.56

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-4C
ARI ID: 12-22185 VR31I

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.22
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.70
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	3.13

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-5C
ARI ID: 12-22186 VR31J

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.65
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.40
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	3.87

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-6C
ARI ID: 12-22187 VR31K

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.85
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.00
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	3.63

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-7C
ARI ID: 12-22188 VR31L

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.80
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.40
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	6.59

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

MS/MSD RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VR31I Client ID: SA2-4C						
Total Organic Carbon	11/21/12	Percent	3.13	7.40	3.41	125.3%

REPLICATE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR31I Client ID: SA2-4C					
Total Solids	11/12/12	Percent	95.70	98.10 98.20	1.5%
Total Organic Carbon	11/21/12	Percent	3.13	2.91 2.47	11.8%

LAB CONTROL RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SW9045	ICVL	11/13/12	std units	7.03	7.00	0.03
Total Organic Carbon	ICVL	11/19/12	Percent	0.100	0.100	100.0%
Plumb,1981	ICVL	11/21/12		0.106	0.100	106.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/12/12	Percent	< 0.01 U
	11/12/12		< 0.01 U
Total Organic Carbon	11/19/12	Percent	< 0.020 U
	11/21/12		< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR31-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon	11/19/12	Percent	2.87	2.99	96.0%
NIST 1941B	11/21/12		2.89	2.99	96.7%

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VR31

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

ALL corrections by DM 11/13/12

Analyst: DM

Date: 11-13-12

Final Volume 50

Final Volume (Hg): 50

Sample ID VR31 ASPK, MBSPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	2977-9		
	Vol Added (mL):	1.0		
STOCK	Ag	50		2.0
	Al	200 ✓	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000 ✓	1000	
	Cd	50		2.0
	Co	50	50	
CONCENTRATION	Cr	50	50	
	Cu	50	50	
	Fe	200 ✓	200	
	K	1000 ✓	1000	
	Mg	1000 ✓	1000	
	Mn	50	50	
	Na	1000 ✓	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	SWN	SWN	~~SWN~~
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	2987-2	2956-7	~~2952-1~~
	1.0	1.0	~~1.0~~
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25 ✓		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25 ✓		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25 ✓		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25 ✓		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	2998-7
Hg MBSPK	↓	CVA	1.0	0.1	↓
Sb	~~SWC~~	ICP	2000	~~0.1~~	~~2944-4~~
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 11-13-12 Time: 1135

Matrix: Soil Block ID: #2 Block Temp: 92°C Thermometer: M030

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR31 A	1	—	1.021	50.0	1.022	50.0	
" DUP	1	—	1.025		1.025		
" MSMK	1	—	1.020		1.025		
" B	1	—	1.072		1.083		
" C	1	—	1.065		1.039		
" D	1	—	1.069		1.089		
" E	1	—	1.046		1.062		
" F	1	—	1.053		1.035		
" G	1	—	1.052		1.066		
" H	1	—	1.018		1.019		
" I	1	—	1.071		1.046		
" J	1	—	1.042		1.055		
" K	1	—	1.077		1.065		
" L	1	—	1.035		1.035		
" MB1	—	—	—		—		
" MB1SMK	—	—	—	50.0	—	50.0	

11-13-12 DM

Chemical/Reagent ID:

HNO_3: M0351 / I7833 HCl: I7676 H_2O_2: I7846 Tube Lot #: 1207143

VR31 : 00090

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM Matrix: Soil
Analyst: DM Date: 11-13-12
Bath Temp: 95°C Start Time: 1203 End Time: 1233

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR31 A	1	—	0.710	50.0	11/RB 1	Y	
" ADUP	1	—	0.706		1		
" ASPK	1	—	0.714		1		
" B	1	—	0.730		1		
" C	1	—	0.728		1		
" D	1	—	0.737		1		
" E	1	—	0.715		1		
" F	1	—	0.732		1		
" G	1	—	0.733		1		
" H	1	—	0.728		1		
" I	1	—	0.719		1		
" J	1	—	0.731		1		
" K	1	—	0.733		1		
" L	1	—	0.748		1		
" MB1	—	—	—	↓	1	↓	
" MB1SPK	—	—	—	50.0	1	Y	
			11-13-12 DM				

Chemical/Reagent ID:

HNO_3: IF033 H_2SO_4: I7671 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 12255258

VR31 : 00091

Criteria Flagged:		ARI Job No.:	VR31
Unacceptable Blank:	☐	Date of Event:	11.15.12
Unacceptable Duplicate:	☑	Client ID:	Hart Crowser, Inc.
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

A : 26.09 ppb N.
ADUP : 32.368 ppb N. RPD = 21.2

ASPK : 1.163 ppb Sb
A : 0 ppb Sb %R = 4.7 post-spike ok

(see attached)

Samples Affected:

Corrective Action Taken:

Send
11/19/12

Analyst Initials: MJJ **Supervisor:**

Date: 11.16.12 **Date:**

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)								VR31 A	
		icpms							
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.025	1.022			SAMP WT	1.025	1.0220		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l				ug/l	ug/l	mg/L	#VALUE!
Be	0.984	1.016	3.49		Be	26.029	1.016	25	100.04007
Na			#DIV/0!		Na			5000	0
Mg			#VALUE!		Mg			5000	#VALUE!
Al			#VALUE!		Al			5000	#VALUE!
K			#DIV/0!		K			5000	0
Ca			#DIV/0!		Ca			5000	0
V	32.204	33.349	3.79		V	58.339	33.349	25	99.568427
Cr	29.573	26.294	11.45		Cr	47.711	26.294	25	85.359264
Fe			#VALUE!		Fe			5000	#VALUE!
Mn			#VALUE!		Mn			25	#VALUE!
Co	9.492	9.816	3.65		Co	32.325	9.816	25	89.920744
Ni	32.368	26.09	21.19		Ni	50.592	26.09	25	97.701659
Cu	21.7090	21.319	1.52		Cu	47.659	21.319	25	105.10968
Zn	130.736	130.811	0.35		Zn	216.103	130.811	80	106.13502
As	11.358	12.009	5.86		As	35.81	12.009	25	95.062994
Se	0	0	#DIV/0!		Se	74.015	0	80	92.51875
Mo			#VALUE!		Mo			25	#VALUE!
Ag			#VALUE!		Ag			25	#VALUE!
Cd	0.889	0.874	1.41		Cd	25.195	0.874	25	97.273738
Sb	0	0	#DIV/0!		Sb	1.163	0	25	4.652
Ba			#VALUE!		Ba			25	#VALUE!
Tl	0	0	#DIV/0!		Tl	24.866	0	25	99.464
Pb	48.463	50.482	4.37		Pb	78.67	50.482	25	112.15926

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VR31

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 1 **of** 7

All corrections made by analyst unless otherwise noted. 11.15.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
Z		ZZZZZZ			~~2926-7~~
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{67}Zn high
		LR200			
		LR300			Ag low
		B1			
		B2			
		B3			
		CCV2			Mo low
		CCB2			
		VR31 MB1	SWN	20	
		1 MB1SPK	1	1	✓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 2 **of** 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR31 A-L	SWN	100	~~fr Mn, Ba (500x)~~
		A		20	~~fr Mn, Ba 100x~~ (CAF)
		ADUP			Ni high RPD
		ASPK			Sb low %R
		APOST			0.6 mL PMS spk #2 (1/10) Sb 0.6 mL PMS spk #1 (1/10)
		C			~~fr Mn, Ba 100x~~
		D			~~fr Mn 100x~~
		E			~~fr Mn, Ba 100x~~
		CCV3			
		CCB3			
		VR31 J	SWN	20	~~fr Mn 100x~~
		F			
		H			
		K		100	~~Mn~~ Pb Zn
		K		20	
		L			~~fr Mn 100x~~
		I			
		G			
		B		400	~~Mn Ba~~ Zn
		B		20	
		CCV4			
		CCB4			
		VR30 MB1	SWN	20	
		MB1SPK			

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, November 15, 2012 11:25:14
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1275
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3053.4	3053.360	71.071	2.3	Standard
	Mg	24.0	29322.9	29322.904	322.760	1.1	Standard
	In	114.9	78650.2	78650.220	497.933	0.6	Standard
	Pb	208.0	34955.6	34955.628	120.271	0.3	Standard
	U	238.1	61022.0	61022.015	440.425	0.7	Standard
⌈	CeO	155.9	1000.7	0.013	0.000	3.8	Standard
| >	Ce	139.9	76266.2	76266.222	634.937	0.8	Standard
⌊	Ce++	70.0	657.5	0.009	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

)timization Summary

1artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 11/15/2012 11:25:12 AM
1d Time: 11/15/2012 11:27:47 AM

1ily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3053.36
Obtained Intensity (Mg 23.985): 29322.90
Obtained Intensity (In 114.904): 78650.22
Obtained Intensity (Pb 207.977): 34955.63
Obtained Intensity (U 238.05): 61022.02
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.013 (=1000.66 / 76266.22)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=657.49 / 76266.22)

SmartTune Wizard - Summary

ptimization Summary

nartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:17:32 AM
nd Time: 11/15/2012 11:19:44 AM

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.708)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:20:57 AM
nd Time: 11/15/2012 11:25:08 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 11:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				726304	0
[	Be	9		ug/L				5	53
	C	13		ug/L				58801	3
	Cl	37		ug/L				3025336	4
[>	Sc	45		ug/L				671354	1
|	V	51		ug/L				5156	3
|	V-1	51		ug/L				130	18
|	Cr	52		ug/L				15247	2
|	Cr	53		ug/L				115	5
|	Mn	55		ug/L				250	8
[	Co	59		ug/L				40	11
[>	Ge	72		ug/L				457613	0
|	Ni	60		ug/L				22	30
|	Ni	62		ug/L				29	10
|	Cu	63		ug/L				58	22
|	Cu	65		ug/L				28	19
|	Zn	66		ug/L				143	10
|	Zn	67		ug/L				23	23
|	Zn	68		ug/L				137	9
|	As	75		ug/L				267	5
|	As-1	75		ug/L				8149	1
|	Se	82		ug/L				-5	14
|	Se	78		ug/L				8278	1
[	Mo	98		ug/L				17	21
	Y	89		ug/L				298590	2
	Kr	83		ug/L				554	4
[>	In	115		ug/L				979916	1
|	Ag	107		ug/L				15	17
|	Cd	111		ug/L				63	6
|	Cd	114		ug/L				30	9
|	Sb	121		ug/L				102	39
|	Sb	123		ug/L				72	14
|	Ba	135		ug/L				11	13
[	Ba	137		ug/L				17	10
[>	Tb	159		ug/L				1160798	1
|	Tl	205		ug/L				51	19
|	Pb	208		ug/L				139	3
|	Bi	209		ug/L				2367270	0
|	Th	232		ug/L				21	59
[	U	238		ug/L				3	41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:03:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	721999	0
	Be	9	0.200	ug/L	0.008	4	5	500	4
	C	13		ug/L			58801	61004	4
	Cl	37		ug/L			3025336	2900221	1
>	Sc	45		ug/L			671354	664677	2
	V	51	0.200	ug/L	0.030	14	5156	8058	3
	V-1	51	0.200	ug/L	0.013	6	130	2979	4
	Cr	52	0.500	ug/L	0.070	13	15247	21420	2
	Cr	53	0.500	ug/L	0.016	3	115	796	3
	Mn	55	0.500	ug/L	0.009	1	250	8460	2
	Co	59	0.200	ug/L	0.008	3	40	2660	0
>	Ge	72		ug/L			457613	458359	0
	Ni	60	0.500	ug/L	0.006	1	22	1424	1
	Ni	62	0.500	ug/L	0.031	6	29	219	5
	Cu	63	0.500	ug/L	0.003	0	58	3329	0
	Cu	65	0.500	ug/L	0.016	3	28	1508	2
	Zn	66	4.000	ug/L	0.074	1	143	7230	1
	Zn	67	4.000	ug/L	0.084	2	23	1119	2
	Zn	68	4.000	ug/L	0.105	2	137	5189	2
	As	75	0.200	ug/L	0.011	5	267	631	3
	As-1	75	0.200	ug/L	0.037	18	8149	8627	1
	Se	82	0.500	ug/L	0.027	5	-5	100	5
	Se	78	0.500	ug/L	0.090	17	8278	8635	1
	Mo	98	0.200	ug/L	0.006	2	17	886	2
	Y	89		ug/L			298590	302917	1
	Kr	83		ug/L			554	520	1
>	In	115		ug/L			979916	996805	0
	Ag	107	0.200	ug/L	0.001	0	15	3021	1
	Cd	111	0.100	ug/L	0.004	3	63	592	4
	Cd	114	0.100	ug/L	0.006	6	30	1237	6
	Sb	121	0.200	ug/L	0.006	2	102	3067	2
	Sb	123	0.200	ug/L	0.008	3	72	2282	3
	Ba	135	0.500	ug/L	0.004	0	11	2172	1
	Ba	137	0.500	ug/L	0.019	3	17	3761	3
>	Tb	159		ug/L			1160798	1148209	0
	Tl	205	0.200	ug/L	0.002	0	51	7419	0
	Pb	208	0.100	ug/L	0.001	0	139	5039	0
	Bi	209		ug/L			2367270	2396482	1
	Th	232	0.200	ug/L	0.003	1	21	8440	1
	U	238	0.200	ug/L	0.003	1	3	9178	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	716986	1
	Be	9	10.000	ug/L	0.111	1	5	23410	2
	C	13		ug/L			58801	59693	6
	Cl	37		ug/L			3025336	2984447	0
>	Sc	45		ug/L			671354	674326	1
	V	51	10.000	ug/L	0.329	3	5156	143597	4
	V-1	51	10.000	ug/L	0.247	2	130	139693	3
	Cr	52	9.998	ug/L	0.079	0	15247	135864	1
	Cr	53	10.000	ug/L	0.488	4	115	14104	3
	Mn	55	10.000	ug/L	0.102	1	250	167408	2
	Co	59	10.000	ug/L	0.402	4	40	131071	2
>	Ge	72		ug/L			457613	466494	1
	Ni	60	9.999	ug/L	0.357	3	22	27973	2
	Ni	62	10.001	ug/L	0.253	2	29	4073	1
	Cu	63	9.999	ug/L	0.466	4	58	64397	2
	Cu	65	9.999	ug/L	0.131	1	28	29424	0
	Zn	66	9.955	ug/L	0.279	2	143	17603	1
	Zn	67	10.070	ug/L	0.071	0	23	2958	2
	Zn	68	9.958	ug/L	0.281	2	137	12610	0
	As	75	9.999	ug/L	0.082	0	267	15856	1
	As-1	75	9.998	ug/L	0.137	1	8149	23661	0
	Se	82	9.994	ug/L	0.150	1	-5	1757	1
	Se	78	9.984	ug/L	0.305	3	8278	12676	0
	Mo	98	10.000	ug/L	0.223	2	17	46183	0
	Y	89		ug/L			298590	304853	1
	Kr	83		ug/L			554	549	4
>	In	115		ug/L			979916	992778	1
	Ag	107	10.000	ug/L	0.156	1	15	149069	0
	Cd	111	10.000	ug/L	0.103	1	63	50207	0
	Cd	114	10.000	ug/L	0.224	2	30	124907	1
	Sb	121	10.000	ug/L	0.138	1	102	155372	0
	Sb	123	10.000	ug/L	0.320	3	72	118774	1
	Ba	135	10.000	ug/L	0.135	1	11	43103	0
	Ba	137	10.000	ug/L	0.163	1	17	73732	0
>	Tb	159		ug/L			1160798	1162542	0
	Tl	205	10.000	ug/L	0.132	1	51	352078	1
	Pb	208	10.000	ug/L	0.169	1	139	470524	0
	Bi	209		ug/L			2367270	2386666	1
	Th	232	10.000	ug/L	0.184	1	21	436902	1
	U	238	10.000	ug/L	0.143	1	3	458868	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:11:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	707275	1
[	Be	9	19.974	ug/L	0.190	0	5	45872	0
	C	13		ug/L			58801	57702	2
	Cl	37		ug/L			3025336	3009285	0
[>	Sc	45		ug/L			671354	673020	0
[	V	51	20.015	ug/L	0.101	0	5156	282424	0
[	V-1	51	20.021	ug/L	0.178	0	130	280146	0
[	Cr	52	19.955	ug/L	0.128	0	15247	253280	0
[	Cr	53	19.977	ug/L	0.428	2	115	27892	2
[	Mn	55	19.961	ug/L	0.737	3	250	330718	3
[	Co	59	19.975	ug/L	0.174	0	40	260070	1
[>	Ge	72		ug/L			457613	463277	1
[	Ni	60	20.120	ug/L	0.373	1	22	57253	0
[	Ni	62	19.957	ug/L	0.411	2	29	7978	3
[	Cu	63	19.917	ug/L	0.856	4	58	125250	2
[	Cu	65	19.971	ug/L	0.412	2	28	57994	0
[	Zn	66	19.988	ug/L	0.667	3	143	34885	2
[	Zn	67	19.876	ug/L	0.492	2	23	5653	0
[	Zn	68	19.968	ug/L	1.162	5	137	24828	3
[	As	75	20.031	ug/L	0.164	0	267	31464	1
[	As-1	75	20.069	ug/L	0.097	0	8149	39286	1
[	Se	82	19.982	ug/L	0.385	1	-5	3481	0
[	Se	78	20.121	ug/L	0.349	1	8278	17074	1
[	Mo	98	19.896	ug/L	0.749	3	17	89370	2
	Y	89		ug/L			298590	308237	0
	Kr	83		ug/L			554	552	4
[>	In	115		ug/L			979916	989356	0
[	Ag	107	19.915	ug/L	0.503	2	15	290934	3
[	Cd	111	19.928	ug/L	0.229	1	63	98242	0
[	Cd	114	19.906	ug/L	0.159	0	30	243250	1
[	Sb	121	19.979	ug/L	0.171	0	102	307996	0
[	Sb	123	19.936	ug/L	0.116	0	72	232976	0
[	Ba	135	19.950	ug/L	0.042	0	11	84844	0
[	Ba	137	19.946	ug/L	0.275	1	17	144984	0
[>	Tb	159		ug/L			1160798	1165022	1
[	Tl	205	19.967	ug/L	0.432	2	51	699768	0
[	Pb	208	19.896	ug/L	0.367	1	139	918823	0
[	Bi	209		ug/L			2367270	2348870	0
[	Th	232	20.016	ug/L	0.421	2	21	879029	1
[	U	238	19.921	ug/L	0.270	1	3	901701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	696747 ✓	0
[	Be	9	49.897	ug/L	0.686	1	5	111740	1
	C	13		ug/L			58801	54239	1
	Cl	37		ug/L			3025336	3163386	3
[>	Sc	45		ug/L			671354	669550 ✓	1
[	V	51	49.953	ug/L	0.938	1	5156	690266	1
[	V-1	51	49.924	ug/L	1.117	2	130	689391	1
[	Cr	52	49.941	ug/L	0.626	1	15247	604281	1
[	Cr	53	49.846	ug/L	1.163	2	115	68004	1
[	Mn	55	50.060	ug/L	0.708	1	250	829657	1
[	Co	59	49.981	ug/L	1.468	2	40	645933	1
[>	Ge	72		ug/L			457613	451350 ✓	2
[	Ni	60	49.978	ug/L	0.690	1	22	138232	1
[	Ni	62	50.065	ug/L	1.302	2	29	19572	1
[	Cu	63	50.245	ug/L	0.142	0	58	315663	2
[	Cu	65	50.084	ug/L	1.326	2	28	142830	0
[	Zn	66	49.801	ug/L	0.242	0	143	82900	2
[	Zn	67	49.945	ug/L	2.045	4	23	13735	4
[	Zn	68	50.018	ug/L	0.646	1	137	60532	1
[	As	75	50.171	ug/L	0.732	1	267	77698	0
[	As-1	75	50.217	ug/L	1.030	2	8149	85364	0
[	Se	82	50.031	ug/L	0.981	1	-5	8527	0
[	Se	78	50.209	ug/L	1.763	3	8278	29743	0
[	Mo	98	50.165	ug/L	1.652	3	17	223173	1
	Y	89		ug/L			298590	300790	2
	Kr	83		ug/L			554	563	5
[>	In	115		ug/L			979916	968693 ✓	1
[	Ag	107	49.690	ug/L	0.746	1	15	689235	0
[	Cd	111	49.942	ug/L	0.972	1	63	239540	0
[	Cd	114	49.889	ug/L	0.348	0	30	590254	0
[	Sb	121	49.991	ug/L	0.730	1	102	753665	0
[	Sb	123	49.934	ug/L	0.921	1	72	567409	1
[	Ba	135	50.037	ug/L	0.678	1	11	209096	0
[	Ba	137	50.124	ug/L	0.813	1	17	361169	0
[>	Tb	159		ug/L			1160798	1161518 ✓	0
[	Tl	205	49.835	ug/L	0.270	0	51	1713158	0
[	Pb	208	49.789	ug/L	0.286	0	139	2245124	0
[	Bi	209		ug/L			2367270	2294195	0
[	Th	232	49.756	ug/L	0.366	0	21	2126922	0
[	U	238	49.645	ug/L	0.102	0	3	2163987	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:22:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	687365	3
	Be	9	98.884	ug/L	2.897	2	5	210487	0
	C	13		ug/L			58801	57400	3
	Cl	37		ug/L			3025336	3210120	1
>	Sc	45		ug/L			671354	654119	1
	V	51	100.575	ug/L	3.378	3	5156	1378884	2
	V-1	51	100.357	ug/L	3.857	3	130	1369972	2
	Cr	52	100.804	ug/L	0.438	0	15247	1208550	1
	Cr	53	100.092	ug/L	1.590	1	115	133715	0
	Mn	55	100.259	ug/L	0.882	0	250	1637308	1
	Co	59	100.111	ug/L	2.851	2	40	1268759	1
>	Ge	72		ug/L			457613	455029	0
	Ni	60	99.662	ug/L	1.501	1	22	274842	1
	Ni	62	99.528	ug/L	1.748	1	29	38602	1
	Cu	63	99.316	ug/L	1.591	1	58	614945	1
	Cu	65	99.163	ug/L	0.649	0	28	277436	0
	Zn	66	99.507	ug/L	1.250	1	143	164160	0
	Zn	67	99.083	ug/L	1.389	1	23	26643	1
	Zn	68	99.192	ug/L	1.199	1	137	117753	1
	As	75	99.617	ug/L	0.859	0	267	153343	0
	As-1	75	99.658	ug/L	0.850	0	8149	161104	0
	Se	82	99.163	ug/L	0.830	0	-5	16586	0
	Se	78	99.322	ug/L	0.696	0	8278	50334	0
	Mo	98	99.526	ug/L	0.646	0	17	439613	0
	Y	89		ug/L			298590	300499	0
	Kr	83		ug/L			554	599	2
>	In	115		ug/L			979916	944524	0
	Ag	107	99.198	ug/L	2.226	2	15	1306740	1
	Cd	111	99.485	ug/L	1.704	1	63	457400	1
	Cd	114	99.730	ug/L	1.497	1	30	1140177	0
	Sb	121	99.787	ug/L	0.890	0	102	1456513	0
	Sb	123	100.284	ug/L	0.778	0	72	1121824	1
	Ba	135	100.151	ug/L	0.666	0	11	410163	1
	Ba	137	100.195	ug/L	1.139	1	17	708572	0
>	Tb	159		ug/L			1160798	1140586	0
	Tl	205	99.199	ug/L	0.492	0	51	3261597	0
	Pb	208	99.379	ug/L	0.874	0	139	4311163	0
	Bi	209		ug/L			2367270	2201217	0
	Th	232	99.564	ug/L	1.210	1	21	4119387	0
	U	238	99.488	ug/L	0.549	0	3	4186821	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:29:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	697054	2
	Be	9	0.004	ug/L	0.003	64	5	14	37
	C	13		ug/L			58801	54932	2
	Cl	37		ug/L			3025336	3115327	1
>	Sc	45		ug/L			671354	652960	2
	V	51	0.033	ug/L	0.012	36	5156	5458	1
	V-1	51	0.012	ug/L	0.005	38	130	294	19
	Cr	52	0.099	ug/L	0.033	33	15247	15991	0
	Cr	53	0.032	ug/L	0.009	27	115	155	5
	Mn	55	0.007	ug/L	0.005	72	250	350	20
	Co	59	0.004	ug/L	0.004	106	40	85	56
>	Ge	72		ug/L			457613	460060	0
	Ni	60	0.003	ug/L	0.006	196	22	31	51
	Ni	62	0.105	ug/L	0.039	36	29	71	21
	Cu	63	0.009	ug/L	0.004	44	58	116	22
	Cu	65	0.003	ug/L	0.003	113	28	37	25
	Zn	66	-0.011	ug/L	0.007	63	143	126	9
	Zn	67	0.013	ug/L	0.024	184	23	27	23
	Zn	68	-0.001	ug/L	0.004	252	137	136	3
	As	75	0.004	ug/L	0.012	319	267	275	6
	As-1	75	0.156	ug/L	0.030	19	8149	8435	0
	Se	82	0.079	ug/L	0.042	52	-5	8	87
	Se	78	0.569	ug/L	0.090	15	8278	8567	0
	Mo	98	0.029	ug/L	0.008	27	17	145	24
	Y	89		ug/L			298590	298582	0
	Kr	83		ug/L			554	524	4
>	In	115		ug/L			979916	957945	0
	Ag	107	0.007	ug/L	0.005	67	15	104	58
	Cd	111	0.009	ug/L	0.005	52	63	104	21
	Cd	114	0.004	ug/L	0.003	69	30	77	43
	Sb	121	0.111	ug/L	0.008	7	102	1736	7
	Sb	123	0.115	ug/L	0.007	5	72	1374	5
	Ba	135	0.004	ug/L	0.004	105	11	26	59
	Ba	137	0.004	ug/L	0.006	124	17	48	81
>	Tb	159		ug/L			1160798	1096676	2
	Tl	205	0.022	ug/L	0.003	12	51	732	9
	Pb	208	0.006	ug/L	0.008	124	139	390	81
	Bi	209		ug/L			2367270	2301499	1
	Th	232	0.136	ug/L	0.032	23	21	5414	22
	U	238	0.007	ug/L	0.006	93	3	270	90

Sample Information

Sample Date/Time: Thursday, November 15, 2012 12:29:30
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9998**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.021	0.20	10	20	50	100
V-1	51	**1.0000**	0.021	0.20	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Co	59	**1.0000**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.010	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.029	0.20	10	20	50	100
Pb	208	**0.9999**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.036	0.20	10	20	50	100
U	238	**0.9999**	0.037	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICV~~ 222222
Sample Dil Factor: 11.15.12 MJT
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:37:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			0	690107	0
[	Be	9	53.146	ug/L	0.766	1	0	113655	2
	C	13		ug/L			0	58734	1
	Cl	37		ug/L			0	3218935	3
[>	Sc	45		ug/L			0	672341	1
[	V	51	51.135	ug/L	1.411	2	0	718001	1
[	V-1	51	51.269	ug/L	1.224	2	0	719375	1
[	Cr	52	51.116	ug/L	1.808	3	0	621996	2
[	Cr	53	51.554	ug/L	1.461	2	0	70724	1
[	Mn	55	50.623	ug/L	0.324	0	0	849591	0
[	Co	59	50.494	ug/L	1.283	2	0	657818	2
[>	Ge	72		ug/L			0	469528	2
[	Ni	60	51.045	ug/L	1.012	1	0	145194	1
[	Ni	62	50.392	ug/L	0.923	1	0	20146	1
[	Cu	63	50.431	ug/L	1.704	3	0	322032	2
[	Cu	65	51.674	ug/L	1.650	3	0	149088	1
[	Zn	66	49.950	ug/L	1.747	3	0	84910	1
[	Zn	67	51.040	ug/L	2.180	4	0	14137	1
[	Zn	68	49.942	ug/L	0.951	1	0	61094	2
[	As	75	49.536	ug/L	0.730	1	0	78525	1
[	As-1	75	54.687	ug/L	0.896	1	0	86610	1
[	Se	82	77.809	ug/L	2.086	2	0	13427	0
[	Se	78	97.432	ug/L	2.602	2	0	42596	0
[	Mo	98	47.414	ug/L	1.368	2	0	216012	1
	Y	89		ug/L			0	303652	0
	Kr	83		ug/L			0	553	2
[>	In	115		ug/L			0	972119	1
[	Ag	107	49.472	ug/L	0.758	1	0	670726	1
[	Cd	111	49.450	ug/L	0.135	0	0	233986	1
[	Cd	114	49.954	ug/L	0.778	1	0	587773	1
[	Sb	121	49.688	ug/L	0.336	0	0	746416	1
[	Sb	123	49.378	ug/L	1.080	2	0	568383	1
[	Ba	135	50.653	ug/L	0.778	1	0	213478	0
[	Ba	137	50.086	ug/L	0.201	0	0	364553	0
[>	Tb	159		ug/L			0	1145568	0
[	Tl	205	52.835	ug/L	0.080	0	0	1744757	0
[	Pb	208	52.193	ug/L	0.627	1	0	2273959	0
[	Bi	209		ug/L			0	2233958	1
[	Th	232	52.401	ug/L	0.533	1	0	2177561	0
[	U	238	53.356	ug/L	0.280	0	0	2255260	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:45:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679842	0
	Be	9	52.033	ug/L	0.897	1	5	109609	1
	C	13		ug/L			58801	58588	3
	Cl	37		ug/L			3025336	3137156	1
>	Sc	45		ug/L			671354	663548	1
	V	51	50.369	ug/L	1.559	3	5156	703055	2
	V-1	51	51.026	ug/L	1.308	2	130	706690	1
	Cr	52	49.148	ug/L	1.798	3	15247	605277	2
	Cr	53	51.294	ug/L	1.325	2	115	69558	1
	Mn	55	49.800	ug/L	1.636	3	250	824882	1
	Co	59	50.757	ug/L	1.909	3	40	652468	2
>	Ge	72		ug/L			457613	473522	2
	Ni	60	49.094	ug/L	1.705	3	22	140845	3
	Ni	62	49.307	ug/L	0.997	2	29	19910	1
	Cu	63	49.414	ug/L	1.923	3	58	318202	1
	Cu	65	49.824	ug/L	1.135	2	28	145015	0
	Zn	66	49.078	ug/L	2.006	4	143	84273	1
	Zn	67	49.714	ug/L	2.289	4	23	13910	1
	Zn	68	48.338	ug/L	1.365	2	137	59753	0
	As	75	49.141	ug/L	2.527	5	267	78784	2
	As-1	75	49.011	ug/L	2.500	5	8149	86664	2
	Se	82	76.836	ug/L	3.394	4	-5	13361	1
	Se	78	76.378	ug/L	3.306	4	8278	42232	1
	Mo	98	46.387	ug/L	2.488	5	17	213021	2
	Y	89		ug/L			298590	300868	2
	Kr	83		ug/L			554	563	4
>	In	115		ug/L			979916	953436	0
	Ag	107	48.913	ug/L	0.733	1	15	650479	2
	Cd	111	49.593	ug/L	0.101	0	63	230208	0
	Cd	114	49.704	ug/L	0.452	0	30	573631	0
	Sb	121	49.579	ug/L	0.247	0	102	730567	1
	Sb	123	49.446	ug/L	0.673	1	72	558346	1
	Ba	135	50.215	ug/L	0.617	1	11	207610	2
	Ba	137	50.215	ug/L	0.489	0	17	358504	1
>	Tb	159		ug/L			1160798	1132838	0
	Tl	205	52.259	ug/L	0.886	1	51	1706490	1
	Pb	208	51.235	ug/L	0.802	1	139	2207482	0
	Bi	209		ug/L			2367270	2236728	0
	Th	232	51.732	ug/L	1.328	2	21	2125707	1
	U	238	52.606	ug/L	1.153	2	3	2198678	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669243	2
	Be	9	0.004	ug/L	0.004	115	5	13	66
	C	13		ug/L			58801	54183	1
	Cl	37		ug/L			3025336	3033736	1
>	Sc	45		ug/L			671354	641399	1
	V	51	0.023	ug/L	0.011	47	5156	5231	2
	V-1	51	0.006	ug/L	0.003	43	130	205	15
	Cr	52	0.079	ug/L	0.025	32	15247	15481	0
	Cr	53	0.024	ug/L	0.013	53	115	142	10
	Mn	55	0.004	ug/L	0.003	60	250	307	11
	Co	59	0.002	ug/L	0.002	92	40	59	32
>	Ge	72		ug/L			457613	463989	2
	Ni	60	-0.000	ug/L	0.002	32711	22	23	23
	Ni	62	0.122	ug/L	0.014	11	29	78	5
	Cu	63	0.010	ug/L	0.004	46	58	119	22
	Cu	65	-0.001	ug/L	0.001	94	28	25	9
	Zn	66	-0.004	ug/L	0.003	63	143	137	2
	Zn	67	-0.009	ug/L	0.008	92	23	21	11
	Zn	68	-0.002	ug/L	0.005	240	137	136	4
	As	75	-0.008	ug/L	0.038	451	267	257	20
	As-1	75	0.092	ug/L	0.158	173	8149	8401	0
	Se	82	-0.008	ug/L	0.105	1266	-5	-7	252
	Se	78	0.354	ug/L	0.540	152	8278	8543	0
	Mo	98	0.012	ug/L	0.001	11	17	69	9
	Y	89		ug/L			298590	293125	0
	Kr	83		ug/L			554	562	1
>	In	115		ug/L			979916	951777	1
	Ag	107	0.002	ug/L	0.001	39	15	41	26
	Cd	111	0.003	ug/L	0.001	21	63	76	2
	Cd	114	0.001	ug/L	0.002	109	30	46	40
	Sb	121	0.027	ug/L	0.006	23	102	491	17
	Sb	123	0.029	ug/L	0.006	19	72	393	15
	Ba	135	0.004	ug/L	0.009	200	11	29	122
	Ba	137	0.004	ug/L	0.007	167	17	47	109
>	Tb	159		ug/L			1160798	1078092	1
	Tl	205	0.009	ug/L	0.007	76	51	314	62
	Pb	208	0.005	ug/L	0.007	138	139	324	82
	Bi	209		ug/L			2367270	2257219	0
	Th	232	0.067	ug/L	0.010	14	21	2631	12
	U	238	0.004	ug/L	0.004	88	3	165	84

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:58:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672643	1
	Be	9	51.640	ug/L	1.204	2	5	107647	3
	C	13		ug/L			58801	54915	2
	Cl	37		ug/L			3025336	3145302	2
>	Sc	45		ug/L			671354	649221	1
	V	51	49.830	ug/L	0.563	1	5156	680651	0
	V-1	51	50.212	ug/L	0.923	1	130	680465	1
	Cr	52	50.260	ug/L	1.406	2	15247	605352	2
	Cr	53	51.510	ug/L	1.619	3	115	68345	2
	Mn	55	50.304	ug/L	0.454	0	250	815413	0
	Co	59	51.786	ug/L	0.231	0	40	651516	1
>	Ge	72		ug/L			457613	459939	1
	Ni	60	50.470	ug/L	1.372	2	22	140653	1
	Ni	62	49.846	ug/L	0.648	1	29	19555	0
	Cu	63	51.230	ug/L	2.106	4	58	320542	2
	Cu	65	51.245	ug/L	1.016	1	28	144908	0
	Zn	66	49.705	ug/L	1.726	3	143	82938	2
	Zn	67	51.199	ug/L	1.131	2	23	13926	2
	Zn	68	51.268	ug/L	0.740	1	137	61576	0
	As	75	49.582	ug/L	1.100	2	267	77269	1
	As-1	75	50.018	ug/L	0.989	1	8149	85799	1
	Se	82	49.834	ug/L	1.549	3	-5	8420	1
	Se	78	51.372	ug/L	1.242	2	8278	30327	0
	Mo	98	48.399	ug/L	0.835	1	17	216091	2
	Y	89		ug/L			298590	298621	0
	Kr	83		ug/L			554	557	5
>	In	115		ug/L			979916	938906	1
	Ag	107	47.685	ug/L	0.692	1	15	624431	1
	Cd	111	50.910	ug/L	0.097	0	63	232717	1
	Cd	114	50.700	ug/L	1.020	2	30	576141	1
	Sb	121	50.246	ug/L	0.821	1	102	728986	0
	Sb	123	49.941	ug/L	1.037	2	72	555258	1
	Ba	135	50.622	ug/L	1.064	2	11	206045	0
	Ba	137	50.218	ug/L	1.309	2	17	352955	1
>	Tb	159		ug/L			1160798	1111509	1
	Tl	205	51.733	ug/L	0.826	1	51	1657421	0
	Pb	208	51.292	ug/L	0.795	1	139	2168210	0
	Bi	209		ug/L			2367270	2215073	0
	Th	232	50.837	ug/L	0.534	1	21	2049675	0
	U	238	52.131	ug/L	1.387	2	3	2137564	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:05:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	673300 ✓	0
	Be	9	0.002	ug/L	0.001	33	5	8	13
	C	13		ug/L			58801	56331	3
	Cl	37		ug/L			3025336	3054027	1
>	Sc	45		ug/L			671354	643550 ✓	1
	V	51	0.024	ug/L	0.008	32	5156	5265	2
	V-1	51	0.002	ug/L	0.001	56	130	158	13
	Cr	52	0.080	ug/L	0.037	46	15247	15550	3
	Cr	53	0.010	ug/L	0.012	122	115	124	13
	Mn	55	0.003	ug/L	0.002	54	250	285	10
	Co	59	0.001	ug/L	0.000	56	40	46	10
>	Ge	72		ug/L			457613	454935 ✓	1
	Ni	60	0.004	ug/L	0.007	182	22	33	60
	Ni	62	0.143	ug/L	0.038	26	29	85	18
	Cu	63	0.009	ug/L	0.001	8	58	113	5
	Cu	65	0.001	ug/L	0.004	298	28	32	36
	Zn	66	-0.010	ug/L	0.008	80	143	125	9
	Zn	67	-0.004	ug/L	0.013	290	23	22	15
	Zn	68	-0.006	ug/L	0.005	84	137	129	2
	As	75	-0.012	ug/L	0.007	57	267	248	5
	As-1	75	0.278	ug/L	0.134	48	8149	8526	1
	Se	82	-0.055	ug/L	0.059	107	-5	-14	67
	Se	78	1.018	ug/L	0.490	48	8278	8659	1
	Mo	98	0.016	ug/L	0.002	14	17	86	11
	Y	89		ug/L			298590	293139	1
	Kr	83		ug/L			554	565	5
>	In	115		ug/L			979916	934887 ✓	0
	Ag	107	0.002	ug/L	0.001	30	15	45	20
	Cd	111	0.005	ug/L	0.003	61	63	81	16
	Cd	114	0.002	ug/L	0.001	61	30	51	26
	Sb	121	0.067	ug/L	0.006	8	102	1068	8
	Sb	123	0.066	ug/L	0.007	10	72	796	9
	Ba	135	0.002	ug/L	0.001	27	11	21	12
	Ba	137	0.001	ug/L	0.001	156	17	22	42
>	Tb	159		ug/L			1160798	1068831 ✓	0
	Tl	205	0.006	ug/L	0.002	28	51	218	22
	Pb	208	0.001	ug/L	0.001	81	139	162	16
	Bi	209		ug/L			2367270	2233301	1
	Th	232	0.113	ug/L	0.016	13	21	4384	13
	U	238	0.002	ug/L	0.000	21	3	80	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:09:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	664724	1
	Be	9	0.218	ug/L	0.013	6	5	453	5
	C	13		ug/L			58801	56361	3
	Cl	37		ug/L			3025336	2995308	2
>	Sc	45		ug/L			671354	647077	3
	V	51	0.232	ug/L	0.023	9	5156	8106	1
	V-1	51	0.208	ug/L	0.013	6	130	2938	3
	Cr	52	0.610	ug/L	0.062	10	15247	21826	0
	Cr	53	0.532	ug/L	0.023	4	115	813	0
	Mn	55	0.520	ug/L	0.023	4	250	8637	2
	Co	59	0.214	ug/L	0.013	6	40	2718	3
>	Ge	72		ug/L			457613	451418	1
	Ni	60	0.520	ug/L	0.014	2	22	1445	1
	Ni	62	0.662	ug/L	0.059	8	29	283	7
	Cu	63	0.541	ug/L	0.007	1	58	3380	2
	Cu	65	0.550	ug/L	0.030	5	28	1553	6
	Zn	66	4.418	ug/L	0.132	2	143	7364	2
	Zn	67	4.073	ug/L	0.109	2	23	1108	1
	Zn	68	4.349	ug/L	0.026	0	137	5250	1
	As	75	0.190	ug/L	0.018	9	267	553	5
	As-1	75	0.540	ug/L	0.025	4	8149	8861	1
	Se	82	0.584	ug/L	0.048	8	-5	91	9
	Se	78	1.794	ug/L	0.117	6	8278	8920	1
	Mo	98	0.193	ug/L	0.006	3	17	863	3
	Y	89		ug/L			298590	296537	0
	Kr	83		ug/L			554	517	1
>	In	115		ug/L			979916	943085	1
	Ag	107	0.202	ug/L	0.005	2	15	2676	1
	Cd	111	0.115	ug/L	0.009	7	63	588	6
	Cd	114	0.107	ug/L	0.005	4	30	1252	5
	Sb	121	0.213	ug/L	0.007	3	102	3206	2
	Sb	123	0.215	ug/L	0.003	1	72	2471	0
	Ba	135	0.511	ug/L	0.022	4	11	2099	3
	Ba	137	0.493	ug/L	0.006	1	17	3497	1
>	Tb	159		ug/L			1160798	1071843	1
	Tl	205	0.222	ug/L	0.004	1	51	6896	0
	Pb	208	0.116	ug/L	0.004	3	139	4848	1
	Bi	209		ug/L			2367270	2241773	0
	Th	232	0.260	ug/L	0.007	2	21	10131	1
	U	238	0.219	ug/L	0.005	2	3	8666	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:13:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	657521	1
[	Be	9	0.000	ug/L	0.001	971	5	5	39
	C	13		ug/L			58801	113952	2
	Cl	37		ug/L			3025336	8335589	2
[>	Sc	45		ug/L			671354	664054	2
[	V	51	0.068	ug/L	0.032	47	5156	6048	8
[	V-1	51	1.416	ug/L	0.043	3	130	19751	0
[	Cr	52	0.596	ug/L	0.030	5	15247	22239	1
[	Cr	53	5.006	ug/L	0.187	3	115	6895	1
[	Mn	55	0.047	ug/L	0.004	7	250	1033	3
[	Co	59	0.021	ug/L	0.001	3	40	307	1
[>	Ge	72		ug/L			457613	442144	1
[	Ni	60	0.343	ug/L	0.014	4	22	941	3
[	Ni	62	2.875	ug/L	0.551	19	29	1109	17
[	Cu	63	0.946	ug/L	0.047	4	58	5742	3
[	Cu	65	0.305	ug/L	0.024	8	28	855	6
[	Zn	66	0.896	ug/L	0.009	1	143	1572	0
[	Zn	67	6.568	ug/L	0.015	0	23	1737	1
[	Zn	68	0.398	ug/L	0.021	5	137	590	2
[	As	75	0.049	ug/L	0.058	119	267	331	25
[	As-1	75	0.468	ug/L	0.102	21	8149	8570	0
[	Se	82	-0.219	ug/L	0.106	48	-5	-41	43
[	Se	78	1.645	ug/L	0.274	16	8278	8675	0
[	Mo	98	417.302	ug/L	10.636	2	17	1790660	1
	Y	89		ug/L			298590	294224	1
	Kr	83		ug/L			554	719	5
[>	In	115		ug/L			979916	944291	1
[	Ag	107	0.026	ug/L	0.002	7	15	350	6
[	Cd	111	0.113	ug/L	0.014	12	63	580	11
[	Cd	114	0.266	ug/L	0.002	0	30	3070	0
[	Sb	121	0.070	ug/L	0.003	4	102	1126	4
[	Sb	123	0.073	ug/L	0.003	4	72	883	5
[	Ba	135	0.051	ug/L	0.003	6	11	219	6
[	Ba	137	0.041	ug/L	0.002	5	17	309	5
[>	Tb	159		ug/L			1160798	1158938	1
[	Tl	205	0.036	ug/L	0.001	2	51	1249	2
[	Pb	208	0.031	ug/L	0.001	3	139	1493	3
[	Bi	209		ug/L			2367270	2140693	0
[	Th	232	0.234	ug/L	0.129	55	21	9824	53
[	U	238	0.002	ug/L	0.000	18	3	70	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:19:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	650871 ✓	1
[	Be	9	0.001	ug/L	0.001	167	5	6	32
	C	13		ug/L			58801	113109	1
	Cl	37		ug/L			3025336	8133764	2
[>	Sc	45		ug/L			671354	649064 ✓	1
[	V	51	0.067	ug/L	0.164	243	5156	5874	36
[	V-1	51	1.481	ug/L	0.048	3	130	20184	1
[	Cr	52	20.105	ug/L	0.697	3	15247	250901	1
[	Cr	53	24.778	ug/L	0.349	1	115	32928	0
[	Mn	55	19.515	ug/L	0.173	0	250	316411	0
[	Co	59	19.846	ug/L	0.342	1	40	249666	2
[>	Ge	72		ug/L			457613	434992 ✓	1
[	Ni	60	20.342	ug/L	0.279	1	22	53640	1
[	Ni	62	23.807	ug/L	0.494	2	29	8848	1
[	Cu	63	20.600	ug/L	0.126	0	58	121985	1
[	Cu	65	20.475	ug/L	0.552	2	28	54772	1
[	Zn	66	20.028	ug/L	0.288	1	143	31692	0
[	Zn	67	24.416	ug/L	0.108	0	23	6293	0
[	Zn	68	18.434	ug/L	0.234	1	137	21023	0
[	As	75	19.377	ug/L	0.169	0	267	28716	0
[	As-1	75	19.980	ug/L	0.202	1	8149	37068	0
[	Se	82	-0.204	ug/L	0.108	52	-5	-37	46
[	Se	78	2.215	ug/L	0.164	7	8278	8766	0
[	Mo	98	420.975	ug/L	13.426	3	17	1777102	1
	Y	89		ug/L			298590	291174	0
	Kr	83		ug/L			554	682	6
[>	In	115		ug/L			979916	947542 ✓	1
[	Ag	107	20.273	ug/L	0.411	2	15	267896	1
[	Cd	111	19.776	ug/L	0.253	1	63	91272	1
[	Cd	114	19.879	ug/L	0.241	1	30	228016	0
[	Sb	121	0.069	ug/L	0.004	5	102	1115	4
[	Sb	123	0.071	ug/L	0.002	2	72	869	1
[	Ba	135	0.050	ug/L	0.000	0	11	217	1
[	Ba	137	0.045	ug/L	0.002	3	17	334	3
[>	Tb	159		ug/L			1160798	1159475 ✓	1
[	Tl	205	0.033	ug/L	0.003	8	51	1142	6
[	Pb	208	0.033	ug/L	0.000	1	139	1588	0
[	Bi	209		ug/L			2367270	2159771	0
[	Th	232	0.072	ug/L	0.019	26	21	3041	26
[	U	238	0.000	ug/L	0.000	12	3	23	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:26:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	609319	1
	Be	9	206.077	ug/L	3.482	1	5	389040	1
	C	13		ug/L			58801	55833	0
	Cl	37		ug/L			3025336	3189014	2
>	Sc	45		ug/L			671354	602641	1
	V	51	195.948	ug/L	7.680	3	5156	2470524	2
	V-1	51	199.129	ug/L	7.737	3	130	2504225	2
	Cr	52	195.961	ug/L	4.733	2	15247	2151167	1
	Cr	53	206.364	ug/L	5.092	2	115	253859	1
	Mn	55	195.404	ug/L	3.233	1	250	2939491	1
	Co	59	200.405	ug/L	6.381	3	40	2339954	2
>	Ge	72		ug/L			457613	425535	0
	Ni	60	198.985	ug/L	2.180	1	22	513113	0
	Ni	62	198.880	ug/L	1.683	0	29	72115	1
	Cu	63	200.571	ug/L	1.648	0	58	1161356	0
	Cu	65	199.425	ug/L	4.286	2	28	521708	1
	Zn	66	194.570	ug/L	5.667	2	143	300077	3
	Zn	67	199.674	ug/L	5.517	2	23	50182	2
	Zn	68	191.986	ug/L	2.160	1	137	213004	0
	As	75	197.213	ug/L	2.875	1	267	283637	0
	As-1	75	197.476	ug/L	2.860	1	8149	291090	0
	Se	82	194.359	ug/L	2.528	1	-5	30405	0
	Se	78	195.440	ug/L	2.980	1	8278	85172	1
	Mo	98	202.854	ug/L	4.196	2	17	837990	2
	Y	89		ug/L			298590	282070	2
	Kr	83		ug/L			554	661	0
>	In	115		ug/L			979916	910337	2
	Ag	107	185.645	ug/L	3.522	1	15	2356522	0
	Cd	111	197.211	ug/L	2.645	1	63	873743	0
	Cd	114	192.799	ug/L	3.502	1	30	2124127	1
	Sb	121	196.719	ug/L	3.933	1	102	2766689	0
	Sb	123	197.492	ug/L	4.290	2	72	2128579	0
	Ba	135	207.938	ug/L	4.721	2	11	820519	0
	Ba	137	207.000	ug/L	4.826	2	17	1410525	0
>	Tb	159		ug/L			1160798	1104780	0
	Tl	205	197.430	ug/L	1.709	0	51	6287827	1
	Pb	208	196.838	ug/L	1.394	0	139	8270727	0
	Bi	209		ug/L			2367270	2090096	1
	Th	232	201.470	ug/L	1.463	0	21	8074015	0
	U	238	201.287	ug/L	3.374	1	3	8204463	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:33:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	577075	2
	Be	9	306.409	ug/L	13.494	4	5	547527	2
	C	13		ug/L			58801	55076	2
	Cl	37		ug/L			3025336	3162904	4
>	Sc	45		ug/L			671354	612226	1
	V	51	283.797	ug/L	9.660	3	5156	3632748	1
	V-1	51	289.290	ug/L	8.982	3	130	3695831	1
	Cr	52	282.229	ug/L	7.460	2	15247	3141339	1
	Cr	53	300.191	ug/L	3.095	1	115	375145	0
	Mn	55	281.724	ug/L	4.653	1	250	4305097	0
	Co	59	293.242	ug/L	0.943	0	40	3478953	1
>	Ge	72		ug/L			457613	422819	1
	Ni	60	290.818	ug/L	8.256	2	22	745163	3
	Ni	62	299.097	ug/L	5.548	1	29	107725	0
	Cu	63	291.362	ug/L	2.585	0	58	1676304	1
	Cu	65	293.934	ug/L	6.524	2	28	763966	1
	Zn	66	282.337	ug/L	7.145	2	143	432483	1
	Zn	67	289.816	ug/L	6.451	2	23	72355	0
	Zn	68	280.385	ug/L	0.872	0	137	309043	1
	As	75	292.245	ug/L	0.429	0	267	417538	1
	As-1	75	294.389	ug/L	2.060	0	8149	427505	1
	Se	82	278.441	ug/L	5.430	1	-5	43279	1
	Se	78	286.376	ug/L	5.724	1	8278	120435	1
	Mo	98	288.631	ug/L	5.818	2	17	1184544	1
	Y	89		ug/L			298590	273325	1
	Kr	83		ug/L			554	740	5
>	In	115		ug/L			979916	863682	0
	Ag	107	257.877	ug/L	12.200	4	15	3106982	5
	Cd	111	292.348	ug/L	4.398	1	63	1229105	2
	Cd	114	287.278	ug/L	3.540	1	30	3003373	1
	Sb	121	294.235	ug/L	2.356	0	102	3927140	1
	Sb	123	293.233	ug/L	2.550	0	72	2999273	0
	Ba	135	317.752	ug/L	2.211	0	11	1189941	1
	Ba	137	309.519	ug/L	2.815	0	17	2001559	0
>	Tb	159		ug/L			1160798	1089373	0
	Tl	205	292.709	ug/L	4.715	1	51	9191409	1
	Pb	208	286.234	ug/L	3.533	1	139	11858836	0
	Bi	209		ug/L			2367270	1988062	0
	Th	232	295.250	ug/L	3.596	1	21	11667334	0
	U	238	297.492	ug/L	3.924	1	3	11957127	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:40:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	615194	3
[	Be	9	0.003	ug/L	0.003	93	5	10	53
	C	13		ug/L			58801	54586	1
	Cl	37		ug/L			3025336	3096695	3
[>	Sc	45		ug/L			671354	611140	0
[	V	51	0.038	ug/L	0.010	26	5156	5184	2
[	V-1	51	0.012	ug/L	0.001	8	130	267	4
[	Cr	52	0.139	ug/L	0.031	22	15247	15413	1
[	Cr	53	0.051	ug/L	0.007	13	115	169	4
[	Mn	55	0.021	ug/L	0.001	4	250	546	2
[	Co	59	0.002	ug/L	0.000	21	40	63	8
[>	Ge	72		ug/L			457613	448126	0
[	Ni	60	0.022	ug/L	0.002	8	22	82	6
[	Ni	62	0.801	ug/L	0.094	11	29	334	10
[	Cu	63	0.067	ug/L	0.007	11	58	468	9
[	Cu	65	0.022	ug/L	0.003	14	28	87	9
[	Zn	66	1.043	ug/L	0.030	2	143	1833	2
[	Zn	67	1.049	ug/L	0.095	9	23	300	7
[	Zn	68	1.045	ug/L	0.024	2	137	1354	2
[	As	75	-0.008	ug/L	0.032	384	267	249	18
[	As-1	75	0.414	ug/L	0.077	18	8149	8605	0
[	Se	82	0.012	ug/L	0.040	335	-5	-3	197
[	Se	78	1.501	ug/L	0.228	15	8278	8733	0
[	Mo	98	0.053	ug/L	0.007	13	17	246	13
	Y	89		ug/L			298590	286909	2
	Kr	83		ug/L			554	524	4
[>	In	115		ug/L			979916	914244	1
[	Ag	107	0.007	ug/L	0.002	27	15	106	23
[	Cd	111	0.011	ug/L	0.002	19	63	109	7
[	Cd	114	0.005	ug/L	0.000	8	30	79	6
[	Sb	121	0.289	ug/L	0.028	9	102	4176	8
[	Sb	123	0.298	ug/L	0.027	8	72	3292	7
[	Ba	135	0.012	ug/L	0.002	19	11	58	14
[	Ba	137	0.011	ug/L	0.002	14	17	93	10
[>	Tb	159		ug/L			1160798	1059904	0
[	Tl	205	0.040	ug/L	0.014	35	51	1254	33
[	Pb	208	0.009	ug/L	0.001	6	139	506	5
[	Bi	209		ug/L			2367270	2213777	1
[	Th	232	0.176	ug/L	0.025	14	21	6781	14
[	U	238	0.005	ug/L	0.001	11	3	210	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:46:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	619916	1
[	Be	9	0.001	ug/L	0.003	301	5	6	82
	C	13		ug/L			58801	55312	1
	Cl	37		ug/L			3025336	3021845	2
[>	Sc	45		ug/L			671354	605160	3
[	V	51	0.032	ug/L	0.019	58	5156	5045	1
[	V-1	51	0.009	ug/L	0.001	10	130	234	1
[	Cr	52	0.117	ug/L	0.062	52	15247	15005	1
[	Cr	53	0.043	ug/L	0.012	27	115	157	9
[	Mn	55	0.030	ug/L	0.002	6	250	684	3
[	Co	59	0.002	ug/L	0.002	94	40	63	41
[>	Ge	72		ug/L			457613	442941	1
[	Ni	60	0.031	ug/L	0.007	24	22	103	17
[	Ni	62	0.557	ug/L	0.044	7	29	239	7
[	Cu	63	0.049	ug/L	0.001	2	58	354	1
[	Cu	65	0.017	ug/L	0.004	24	28	74	14
[	Zn	66	1.371	ug/L	0.046	3	143	2337	3
[	Zn	67	1.215	ug/L	0.068	5	23	340	6
[	Zn	68	1.322	ug/L	0.028	2	137	1658	2
[	As	75	-0.003	ug/L	0.014	478	267	255	8
[	As-1	75	0.332	ug/L	0.124	37	8149	8382	1
[	Se	82	-0.012	ug/L	0.037	300	-5	-7	83
[	Se	78	1.186	ug/L	0.441	37	8278	8501	0
[	Mo	98	0.017	ug/L	0.005	28	17	89	23
	Y	89		ug/L			298590	286549	0
	Kr	83		ug/L			554	531	1
[>	In	115		ug/L			979916	917489	0
[	Ag	107	0.003	ug/L	0.000	9	15	56	6
[	Cd	111	0.006	ug/L	0.002	34	63	86	11
[	Cd	114	0.002	ug/L	0.001	27	30	52	12
[	Sb	121	0.084	ug/L	0.007	8	102	1281	7
[	Sb	123	0.085	ug/L	0.012	14	72	985	12
[	Ba	135	0.018	ug/L	0.002	11	11	81	9
[	Ba	137	0.014	ug/L	0.002	17	17	115	13
[>	Tb	159		ug/L			1160798	1062534	0
[	Tl	205	0.022	ug/L	0.011	51	51	713	47
[	Pb	208	0.010	ug/L	0.000	2	139	548	2
[	Bi	209		ug/L			2367270	2213394	0
[	Th	232	0.066	ug/L	0.003	4	21	2557	5
[	U	238	0.002	ug/L	0.000	3	3	71	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:52:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641603	1
	Be	9	0.001	ug/L	0.002	129	5	7	45
	C	13		ug/L			58801	56930	4
	Cl	37		ug/L			3025336	3060608	1
>	Sc	45		ug/L			671354	611885	0
	V	51	0.030	ug/L	0.002	6	5156	5085	0
	V-1	51	0.006	ug/L	0.001	19	130	198	7
	Cr	52	0.112	ug/L	0.009	7	15247	15135	0
	Cr	53	0.034	ug/L	0.008	24	115	147	6
	Mn	55	0.013	ug/L	0.001	9	250	424	4
	Co	59	0.002	ug/L	0.000	14	40	61	5
>	Ge	72		ug/L			457613	449443	0
	Ni	60	0.024	ug/L	0.005	21	22	86	14
	Ni	62	0.436	ug/L	0.036	8	29	196	7
	Cu	63	0.037	ug/L	0.002	4	58	283	4
	Cu	65	0.011	ug/L	0.004	33	28	57	16
	Zn	66	0.740	ug/L	0.051	6	143	1344	5
	Zn	67	0.727	ug/L	0.042	5	23	216	5
	Zn	68	0.758	ug/L	0.024	3	137	1022	2
	As	75	0.012	ug/L	0.020	169	267	280	11
	As-1	75	0.213	ug/L	0.052	24	8149	8326	0
	Se	82	0.084	ug/L	0.042	50	-5	8	80
	Se	78	0.745	ug/L	0.238	31	8278	8442	0
	Mo	98	0.011	ug/L	0.003	31	17	63	23
	Y	89		ug/L			298590	284306	2
	Kr	83		ug/L			554	509	6
>	In	115		ug/L			979916	922948	1
	Ag	107	0.003	ug/L	0.002	60	15	55	44
	Cd	111	0.003	ug/L	0.003	121	63	71	19
	Cd	114	0.004	ug/L	0.002	68	30	68	39
	Sb	121	0.042	ug/L	0.005	11	102	696	9
	Sb	123	0.043	ug/L	0.005	11	72	535	9
	Ba	135	0.011	ug/L	0.004	41	11	53	32
	Ba	137	0.009	ug/L	0.000	2	17	81	2
>	Tb	159		ug/L			1160798	1075302	0
	Tl	205	0.014	ug/L	0.004	28	51	470	25
	Pb	208	0.008	ug/L	0.001	16	139	451	11
	Bi	209		ug/L			2367270	2229145	1
	Th	232	0.047	ug/L	0.007	15	21	1860	14
	U	238	0.001	ug/L	0.001	62	3	59	58

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:56:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	629463 ✓	1
[	Be	9	52.179	ug/L	2.220	4	5	101728	2
	C	13		ug/L			58801	52038	1
	Cl	37		ug/L			3025336	3115060	1
[>	Sc	45		ug/L			671354	629930 ✓	1
[	V	51	48.870	ug/L	0.634	1	5156	647808	0
[	V-1	51	48.942	ug/L	0.592	1	130	643582	0
[	Cr	52	49.933	ug/L	0.545	1	15247	583698	0
[	Cr	53	50.172	ug/L	0.410	0	115	64606	1
[	Mn	55	48.989	ug/L	1.592	3	250	770446	2
[	Co	59	50.515	ug/L	1.603	3	40	616810	4
[>	Ge	72		ug/L			457613	455134 ✓	0
[	Ni	60	48.271	ug/L	0.443	0	22	133154	1
[	Ni	62	48.036	ug/L	1.413	2	29	18649	2
[	Cu	63	49.005	ug/L	0.631	1	58	303515	0
[	Cu	65	49.250	ug/L	0.691	1	28	137826	0
[	Zn	66	49.059	ug/L	0.414	0	143	81025	0
[	Zn	67	51.214	ug/L	0.658	1	23	13786	1
[	Zn	68	49.331	ug/L	1.310	2	137	58639	2
[	As	75	48.124	ug/L	0.684	1	267	74227	0
[	As-1	75	48.456	ug/L	0.685	1	8149	82510	0
[	Se	82	48.316	ug/L	0.418	0	-5	8080	0
[	Se	78	49.379	ug/L	1.031	2	8278	29169	1
[	Mo	98	43.992	ug/L	0.468	1	17	194359	0
	Y	89		ug/L			298590	285118	1
	Kr	83		ug/L			554	497	1
[>	In	115		ug/L			979916	914653 ✓	1
[	Ag	107	45.825	ug/L	0.786	1	15	584636	2
[	Cd	111	51.074	ug/L	1.115	2	63	227403	1
[	Cd	114	50.255	ug/L	0.373	0	30	556416	1
[	Sb	121	50.817	ug/L	1.023	2	102	718236	0
[	Sb	123	50.401	ug/L	1.077	2	72	545938	1
[	Ba	135	50.858	ug/L	0.836	1	11	201681	0
[	Ba	137	50.512	ug/L	1.379	2	17	345881	1
[>	Tb	159		ug/L			1160798	1089830 ✓	0
[	Tl	205	51.441	ug/L	0.276	0	51	1616139	0
[	Pb	208	50.891	ug/L	0.418	0	139	2109517	0
[	Bi	209		ug/L			2367270	2186484	0
[	Th	232	51.048	ug/L	0.973	1	21	2018213	2
[	U	238	52.240	ug/L	0.016	0	3	2100659	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:03:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619987 ✓	0
	Be	9	0.000	ug/L	0.001	417	5	5	39
	C	13		ug/L			58801	52087	4
	Cl	37		ug/L			3025336	3065436	1
>	Sc	45		ug/L			671354	613071 ✓	0
	V	51	0.025	ug/L	0.016	65	5156	5026	3
	V-1	51	0.003	ug/L	0.000	9	130	153	2
	Cr	52	0.084	ug/L	0.048	56	15247	14853	2
	Cr	53	0.011	ug/L	0.006	55	115	120	7
	Mn	55	0.004	ug/L	0.001	15	250	296	4
	Co	59	0.001	ug/L	0.001	101	40	45	19
>	Ge	72		ug/L			457613	435471 ✓	0
	Ni	60	0.000	ug/L	0.002	3944	22	21	22
	Ni	62	0.389	ug/L	0.019	4	29	172	3
	Cu	63	0.024	ug/L	0.001	3	58	197	3
	Cu	65	-0.000	ug/L	0.002	1731	28	27	16
	Zn	66	-0.005	ug/L	0.002	38	143	128	2
	Zn	67	0.017	ug/L	0.024	136	23	27	23
	Zn	68	0.006	ug/L	0.015	265	137	136	12
	As	75	-0.001	ug/L	0.018	1417	267	253	10
	As-1	75	0.366	ug/L	0.108	29	8149	8292	0
	Se	82	0.000	ug/L	0.041	26221	-5	-5	128
	Se	78	1.335	ug/L	0.417	31	8278	8418	1
	Mo	98	0.017	ug/L	0.005	33	17	86	26
	Y	89		ug/L			298590	280176	1
	Kr	83		ug/L			554	531	8
>	In	115		ug/L			979916	903574 ✓	1
	Ag	107	0.002	ug/L	0.000	7	15	44	4
	Cd	111	0.006	ug/L	0.003	48	63	85	14
	Cd	114	0.002	ug/L	0.001	29	30	50	13
	Sb	121	0.078	ug/L	0.008	10	102	1185	10
	Sb	123	0.079	ug/L	0.011	13	72	913	13
	Ba	135	0.000	ug/L	0.001	255	11	11	19
	Ba	137	0.000	ug/L	0.000	64	17	18	11
>	Tb	159		ug/L			1160798	1049952 ✓	0
	Tl	205	0.009	ug/L	0.003	39	51	310	33
	Pb	208	0.001	ug/L	0.000	14	139	174	3
	Bi	209		ug/L			2367270	2199190	0
	Th	232	0.105	ug/L	0.016	15	21	4015	15
	U	238	0.002	ug/L	0.000	12	3	72	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	634669	1
	Be	9	0.001	ug/L	0.001	52	5	7	19
	C	13		ug/L			58801	57096	0
	Cl	37		ug/L			3025336	3080979	1
>	Sc	45		ug/L			671354	621749	0
	V	51	0.041	ug/L	0.015	36	5156	5306	3
	V-1	51	0.002	ug/L	0.001	47	130	143	7
	Cr	52	0.126	ug/L	0.042	32	15247	15544	3
	Cr	53	-0.001	ug/L	0.007	509	115	105	8
	Mn	55	0.017	ug/L	0.001	4	250	490	2
	Co	59	0.001	ug/L	0.000	22	40	49	5
>	Ge	72		ug/L			457613	448808	2
	Ni	60	0.003	ug/L	0.005	202	22	29	47
	Ni	62	0.350	ug/L	0.037	10	29	162	6
	Cu	63	0.032	ug/L	0.004	11	58	254	7
	Cu	65	0.016	ug/L	0.001	7	28	71	4
	Zn	66	0.149	ug/L	0.008	5	143	382	5
	Zn	67	0.161	ug/L	0.039	24	23	66	18
	Zn	68	0.168	ug/L	0.017	10	137	330	4
	As	75	-0.026	ug/L	0.024	92	267	223	13
	As-1	75	0.282	ug/L	0.081	28	8149	8416	1
	Se	82	-0.048	ug/L	0.035	71	-5	-13	45
	Se	78	1.038	ug/L	0.267	25	8278	8551	1
	Mo	98	0.006	ug/L	0.002	36	17	40	19
	Y	89		ug/L			298590	289535	1
	Kr	83		ug/L			554	531	4
>	In	115		ug/L			979916	930087	1
	Ag	107	0.002	ug/L	0.000	17	15	34	9
	Cd	111	0.005	ug/L	0.002	50	63	80	11
	Cd	114	0.002	ug/L	0.000	21	30	46	7
	Sb	121	0.029	ug/L	0.004	13	102	519	10
	Sb	123	0.030	ug/L	0.004	14	72	399	12
	Ba	135	0.004	ug/L	0.001	30	11	28	17
	Ba	137	0.004	ug/L	0.000	12	17	41	7
>	Tb	159		ug/L			1160798	1076174	0
	Tl	205	0.007	ug/L	0.003	43	51	256	35
	Pb	208	0.002	ug/L	0.000	13	139	229	5
	Bi	209		ug/L			2367270	2231253	0
	Th	232	0.123	ug/L	0.026	20	21	4831	20
	U	238	0.001	ug/L	0.000	7	3	34	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641814	1
	Be	9	26.263	ug/L	0.843	3	5	52222	2
	C	13		ug/L			58801	53288	1
	Cl	37		ug/L			3025336	3055405	2
>	Sc	45		ug/L			671354	630484	0
	V	51	25.819	ug/L	0.241	0	5156	344883	1
	V-1	51	25.904	ug/L	0.296	1	130	341042	2
	Cr	52	26.456	ug/L	0.248	0	15247	316265	0
	Cr	53	26.735	ug/L	0.265	0	115	34509	1
	Mn	55	26.583	ug/L	0.132	0	250	418605	0
	Co	59	26.248	ug/L	0.372	1	40	320697	1
>	Ge	72		ug/L			457613	461330	0
	Ni	60	25.874	ug/L	0.297	1	22	72351	0
	Ni	62	26.080	ug/L	0.153	0	29	10277	0
	Cu	63	26.070	ug/L	0.451	1	58	163710	1
	Cu	65	26.015	ug/L	0.199	0	28	73815	1
	Zn	66	81.720	ug/L	0.448	0	143	136715	0
	Zn	67	77.963	ug/L	2.808	3	23	21261	4
	Zn	68	78.751	ug/L	1.236	1	137	94803	1
	As	75	24.716	ug/L	0.366	1	267	38775	1
	As-1	75	24.876	ug/L	0.658	2	8149	46933	1
	Se	82	78.606	ug/L	0.836	1	-5	13329	1
	Se	78	79.212	ug/L	1.205	1	8278	42387	1
	Mo	98	22.353	ug/L	0.066	0	17	100117	0
	Y	89		ug/L			298590	294680	2
	Kr	83		ug/L			554	511	5
>	In	115		ug/L			979916	932376	2
	Ag	107	24.217	ug/L	0.718	2	15	314797	0
	Cd	111	25.109	ug/L	0.607	2	63	113967	0
	Cd	114	25.528	ug/L	0.923	3	30	287983	1
	Sb	121	25.405	ug/L	0.521	2	102	366028	0
	Sb	123	25.135	ug/L	0.848	3	72	277466	1
	Ba	135	26.346	ug/L	0.712	2	11	106473	0
	Ba	137	25.758	ug/L	0.561	2	17	179781	0
>	Tb	159		ug/L			1160798	1088396	1
	Tl	205	27.441	ug/L	0.369	1	51	860919	0
	Pb	208	27.177	ug/L	0.337	1	139	1125021	0
	Bi	209		ug/L			2367270	2259344	0
	Th	232	27.067	ug/L	0.548	2	21	1068581	1
	U	238	27.065	ug/L	0.354	1	3	1086886	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~cr Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	673538 ✓	1
	Be	9	0.218	ug/L	0.008	3	5	460	4
	C	13		ug/L			58801	58284	2
	Cl	37		ug/L			3025336	3079334	2
>	Sc	45		ug/L			671354	650187 ✓	1
	V	51	6.992	ug/L	0.042	0	5156	99953	1
	V-1	51	7.024	ug/L	0.052	0	130	95456	2
	Cr	52	5.532	ug/L	0.136	2	15247	79867	1
	Cr	53	5.633	ug/L	0.069	1	115	7586	2
	Mn	55	186.614	ug/L	1.028	0	250	3028956	1
	Co	59	2.068	ug/L	0.033	1	40	26088	1
>	Ge	72		ug/L			457613	465896 ✓	0
	Ni	60	5.404	ug/L	0.144	2	22	15279	2
	Ni	62	5.587	ug/L	0.067	1	29	2247	1
	Cu	63	4.374	ug/L	0.064	1	58	27785	1
	Cu	65	4.409	ug/L	0.037	0	28	12657	0
	Zn	66	27.038	ug/L	0.376	1	143	45778	1
	Zn	67	30.940	ug/L	0.700	2	23	8534	2
	Zn	68	29.433	ug/L	0.197	0	137	35871	0
	As	75	2.424	ug/L	0.048	1	267	4085	1
	As-1	75	2.421	ug/L	0.032	1	8149	12102	0
	Se	82	↘ 0.047	ug/L	0.108	228	-5	2	701
	Se	78	0.026	ug/L	0.062	235	8278	8440	0
	Mo	98	0.083	ug/L	0.002	2	17	390	2
	Y	89		ug/L			298590	322444	1
	Kr	83		ug/L			554	561	5
>	In	115		ug/L			979916	936450 ✓	1
	Ag	107	↘ 0.039	ug/L	0.004	10	15	529	8
	Cd	111	0.208	ug/L	0.008	3	63	1006	1
	Cd	114	0.181	ug/L	0.003	1	30	2077	1
	Sb	121	↘ 0.042	ug/L	0.004	10	102	708	7
	Sb	123	0.039	ug/L	0.005	12	72	501	8
	Ba	135	85.653	ug/L	1.840	2	11	347701	0
	Ba	137	84.132	ug/L	0.712	0	17	589864	0
>	Tb	159		ug/L			1160798	1111161 ✓	1
	Tl	205	↘ 0.039	ug/L	0.002	3	51	1313	4
	Pb	208	10.359	ug/L	0.181	1	139	437841	0
	Bi	209		ug/L			2367270	2245097	0
	Th	232	1.168	ug/L	0.076	6	21	47089	5
	U	238	0.253	ug/L	0.003	1	3	10395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672130	2
	Be	9	1.016	ug/L	0.058	5	5	2118	3
	C	13		ug/L			58801	72062	3
	Cl	37		ug/L			3025336	3089820	2
>	Sc	45		ug/L			671354	685586	1
	V	51	33.349	ug/L	0.675	2	5156	482761	1
	V-1	51	33.559	ug/L	0.632	1	130	480291	0
	Cr	52	26.294	ug/L	0.627	2	15247	341857	1
	Cr	53	26.965	ug/L	0.642	2	115	37840	1
	Mn	55	875.615	ug/L	22.956	2	250	14982253	1
	Co	59	9.816	ug/L	0.325	3	40	130408	2
>	Ge	72		ug/L			457613	454915	0
	Ni	60	26.090	ug/L	0.392	1	22	71942	1
	Ni	62	28.941	ug/L	0.839	2	29	11242	2
	Cu	63	21.319	ug/L	0.445	2	58	132024	2
	Cu	65	22.099	ug/L	0.280	1	28	61838	1
	Zn	66	130.811	ug/L	2.985	2	143	215724	2
	Zn	67	150.801	ug/L	0.804	0	23	40527	1
	Zn	68	144.061	ug/L	1.028	0	137	170908	0
	As	75	12.009	ug/L	0.187	1	267	18714	1
	As-1	75	12.105	ug/L	0.223	1	8149	26680	1
	Se	82	~-0.229	ug/L	0.092	40	-5	-43	35
	Se	78	0.706	ug/L	0.235	33	8278	8529	1
	Mo	98	0.359	ug/L	0.002	0	17	1600	0
	Y	89		ug/L			298590	440007	2
	Kr	83		ug/L			554	887	4
>	In	115		ug/L			979916	933421	1
	Ag	107	~0.194	ug/L	0.006	2	15	2543	1
	Cd	111	1.044	ug/L	0.035	3	63	4802	2
	Cd	114	0.874	ug/L	0.012	1	30	9902	1
	Sb	121	~0.078	ug/L	0.002	2	102	1220	3
	Sb	123	0.074	ug/L	0.002	3	72	891	3
	Ba	135	430.813	ug/L	4.832	1	11	1743387	0
	Ba	137	416.844	ug/L	4.701	1	17	2913016	0
>	Tb	159		ug/L			1160798	1136635	1
	Tl	205	~0.171	ug/L	0.002	1	51	5654	1
	Pb	208	50.482	ug/L	0.666	1	139	2182268	0
	Bi	209		ug/L			2367270	2191684	0
	Th	232	4.809	ug/L	0.021	0	21	198308	0
	U	238	1.232	ug/L	0.013	1	3	51666	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:24:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ag, Mn, Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	681780	2
[	Be	9	0.984	ug/L	0.044	4	5	2083	3
	C	13		ug/L			58801	71989	1
	Cl	37		ug/L			3025336	3106861	2
[>	Sc	45		ug/L			671354	708845	0
[	V	51	32.204	ug/L	0.435	1	5156	482266	1
[	V-1	51	32.441	ug/L	0.438	1	130	480133	1
[	Cr	52	29.573	ug/L	0.512	1	15247	395580	1
[	Cr	53	30.344	ug/L	0.266	0	115	44018	1
[	Mn	55	907.916	ug/L	8.268	0	250	16065415	0
[	Co	59	9.492	ug/L	0.199	2	40	130423	2
[>	Ge	72		ug/L			457613	455525	1
[	Ni	60	32.368	ug/L	0.885	2	22	89353	1
[	Ni	62	34.005	ug/L	0.285	0	29	13222	0
[	Cu	63	21.709	ug/L	0.442	2	58	134587	0
[	Cu	65	22.242	ug/L	0.374	1	28	62310	0
[	Zn	66	130.736	ug/L	0.723	0	143	215868	0
[	Zn	67	150.822	ug/L	3.545	2	23	40578	1
[	Zn	68	141.740	ug/L	4.005	2	137	168349	1
[	As	75	11.358	ug/L	0.129	1	267	17738	0
[	As-1	75	11.434	ug/L	0.179	1	8149	25682	0
[	Se	82	~~-0.258~~	ug/L	0.108	41	-5	-48	38
[	Se	78	0.604	ug/L	0.301	49	8278	8496	1
[	Mo	98	0.329	ug/L	0.032	9	17	1471	8
	Y	89		ug/L			298590	437201	0
	Kr	83		ug/L			554	888	6
[>	In	115		ug/L			979916	933694	1
[	Ag	107	~~0.190~~	ug/L	0.006	3	15	2489	2
[	Cd	111	1.085	ug/L	0.034	3	63	4991	3
[	Cd	114	0.889	ug/L	0.009	0	30	10080	0
[	Sb	121	~~0.072~~	ug/L	0.003	3	102	1139	3
[	Sb	123	0.071	ug/L	0.003	4	72	855	3
[	Ba	135	420.311	ug/L	6.647	1	11	1701386	0
[	Ba	137	406.648	ug/L	8.208	2	17	2842494	0
[>	Tb	159		ug/L			1160798	1130467	1
[	Tl	205	~~0.167~~	ug/L	0.005	2	51	5482	3
[	Pb	208	48.463	ug/L	0.536	1	139	2083637	0
[	Bi	209		ug/L			2367270	2180455	0
[	Th	232	4.631	ug/L	0.088	1	21	189897	1
[	U	238	1.224	ug/L	0.022	1	3	51053	0

ICP-MS Quantitative Analysis - Summary Report

~~CK MA BAT~~
11.16.12 MJT

Sample ID: VR31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	670483	1
	Be	9	26.029	ug/L	0.308	1	5	54077	1
	C	13		ug/L			58801	71566	2
	Cl	37		ug/L			3025336	3092990	1
>	Sc	45		ug/L			671354	700272	2
	V	51	58.339	ug/L	0.744	1	5156	858558	1
	V-1	51	58.782	ug/L	0.820	1	130	859142	1
	Cr	52	47.711	ug/L	1.369	2	15247	620458	0
	Cr	53	49.135	ug/L	1.696	3	115	70298	0
	Mn	55	888.814	ug/L	41.923	4	250	15524293	2
	Co	59	32.325	ug/L	0.741	2	40	438556	1
>	Ge	72		ug/L			457613	447621	3
	Ni	60	50.592	ug/L	2.634	5	22	137074	1
	Ni	62	52.436	ug/L	2.669	5	29	19996	2
	Cu	63	47.659	ug/L	2.501	5	58	289946	1
	Cu	65	48.932	ug/L	3.126	6	28	134470	2
	Zn	66	216.103	ug/L	8.958	4	143	350212	1
	Zn	67	230.839	ug/L	6.949	3	23	60987	1
	Zn	68	222.531	ug/L	11.257	5	137	259364	1
	As	75	35.810	ug/L	1.919	5	267	54321	1
	As-1	75	36.172	ug/L	2.157	5	8149	62518	1
	Se	82	74.015	ug/L	3.614	4	-5	12162	1
	Se	78	76.044	ug/L	4.571	6	8278	39759	0
	Mo	98	20.222	ug/L	0.770	3	17	87798	0
	Y	89		ug/L			298590	440169	0
	Kr	83		ug/L			554	886	0
>	In	115		ug/L			979916	929357	2
	Ag	107	21.758	ug/L	0.258	1	15	282010	1
	Cd	111	25.458	ug/L	0.295	1	63	115201	1
	Cd	114	25.195	ug/L	0.560	2	30	283383	1
	Sb	121	1.163	ug/L	0.028	2	102	16789	2
	Sb	123	1.172	ug/L	0.022	1	72	12968	2
	Ba	135	439.976	ug/L	13.241	3	11	1772126	0
	Ba	137	425.149	ug/L	11.956	2	17	2957229	0
>	Tb	159		ug/L			1160798	1120422	1
	Tl	205	24.866	ug/L	0.313	1	51	803083	0
	Pb	208	78.670	ug/L	1.287	1	139	3351967	0
	Bi	209		ug/L			2367270	2134960	1
	Th	232	29.613	ug/L	0.477	1	21	1203423	0
	U	238	27.278	ug/L	0.529	1	3	1127476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 APOST SWN

Sb

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, November 15, 2012 14:32:31

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	674945	1
	Be	9	23.537	ug/L	0.839	3	5	49224	3
	C	13		ug/L			58801	74723	2
	Cl	37		ug/L			3025336	3106433	1
>	Sc	45		ug/L			671354	707054	2
	V	51	52.713	ug/L	0.094	0	5156	783934	2
	V-1	51	53.034	ug/L	0.311	0	130	782761	1
	Cr	52	45.462	ug/L	1.251	2	15247	597736	0
	Cr	53	46.495	ug/L	2.034	4	115	67169	2
	Mn	55	874.289	ug/L	23.988	2	250	15425904	1
	Co	59	30.677	ug/L	1.207	3	40	420119	2
>	Ge	72		ug/L			457613	450971	1
	Ni	60	49.136	ug/L	0.364	0	22	134307	2
	Ni	62	50.430	ug/L	0.549	1	29	19399	1
	Cu	63	43.996	ug/L	1.140	2	58	270004	2
	Cu	65	44.543	ug/L	0.887	1	28	123535	2
	Zn	66	200.025	ug/L	8.135	4	143	326783	2
	Zn	67	220.831	ug/L	1.481	0	23	58825	2
	Zn	68	213.785	ug/L	4.968	2	137	251309	1
	As	75	34.560	ug/L	0.509	1	267	52891	0
	As-1	75	34.457	ug/L	0.588	1	8149	60453	0
	Se	82	69.700	ug/L	1.283	1	-5	11552	1
	Se	78	69.970	ug/L	1.647	2	8278	37551	1
	Mo	98	20.897	ug/L	0.741	3	17	91470	2
	Y	89		ug/L			298590	448291	0
	Kr	83		ug/L			554	855	1
>	In	115		ug/L			979916	910154	0
	Ag	107	20.863	ug/L	0.635	3	15	264818	2
	Cd	111	23.674	ug/L	1.007	4	63	104914	3
	Cd	114	23.622	ug/L	0.783	3	30	260227	2
	Sb	121	22.439	ug/L	0.751	3	102	315653	3
	Sb	123	22.038	ug/L	0.456	2	72	237584	1
	Ba	135	468.132	ug/L	5.727	1	11	1847256	0
	Ba	137	448.936	ug/L	2.569	0	17	3059485	1
>	Tb	159		ug/L			1160798	1130035	0
	Tl	205	22.921	ug/L	0.648	2	51	746656	2
	Pb	208	72.890	ug/L	0.790	1	139	3132803	0
	Bi	209		ug/L			2367270	2149611	0
	Th	232	27.504	ug/L	0.622	2	21	1127427	1
	U	238	24.154	ug/L	0.755	3	3	1007011	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	698329	2
[	Be	9	0.623	ug/L	0.034	5	5	1353	4
	C	13		ug/L			58801	78455	1
	Cl	37		ug/L			3025336	3160350	1
[>	Sc	45		ug/L			671354	716170	1
[	V	51	34.020	ug/L	0.919	2	5156	514298	1
[	V-1	51	34.234	ug/L	0.763	2	130	511776	1
[	Cr	52	31.894	ug/L	0.597	1	15247	429684	0
[	Cr	53	32.587	ug/L	0.233	0	115	47748	1
[	Mn	55	1063.232	ug/L	28.748	2	250	19002631	1
[	Co	59	8.605	ug/L	0.162	1	40	119440	0
[>	Ge	72		ug/L			457613	456126	1
[	Ni	60	20.904	ug/L	0.185	0	22	57806	1
[	Ni	62	22.903	ug/L	0.461	2	29	8927	1
[	Cu	63	17.626	ug/L	0.087	0	58	109446	0
[	Cu	65	18.048	ug/L	0.413	2	28	50633	1
[	Zn	66	256.240	ug/L	7.636	2	143	423455	2
[	Zn	67	257.678	ug/L	4.340	1	23	69408	0
[	Zn	68	258.967	ug/L	4.660	1	137	307906	1
[	As	75	12.264	ug/L	0.089	0	267	19156	0
[	As-1	75	12.348	ug/L	0.179	1	8149	27123	0
[	Se	82	-0.148	ug/L	0.019	12	-5	-30	9
[	Se	78	0.494	ug/L	0.341	68	8278	8460	0
[	Mo	98	0.503	ug/L	0.005	0	17	2246	1
	Y	89		ug/L			298590	376488	1
	Kr	83		ug/L			554	755	0
[>	In	115		ug/L			979916	944639	0
[	Ag	107	0.140	ug/L	0.006	4	15	1857	3
[	Cd	111	2.156	ug/L	0.013	0	63	9974	1
[	Cd	114	2.032	ug/L	0.024	1	30	23264	1
[	Sb	121	0.143	ug/L	0.007	4	102	2184	5
[	Sb	123	0.134	ug/L	0.008	5	72	1563	5
[	Ba	135	347.645	ug/L	4.971	1	11	1423873	1
[	Ba	137	341.216	ug/L	0.681	0	17	2413434	0
[>	Tb	159		ug/L			1160798	1130115	0
[	Tl	205	0.171	ug/L	0.002	0	51	5624	0
[	Pb	208	87.202	ug/L	0.093	0	139	3748211	0
[	Bi	209		ug/L			2367270	2210582	0
[	Th	232	6.039	ug/L	0.062	1	21	247579	1
[	U	238	0.757	ug/L	0.007	0	3	31556	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:41:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AF MM~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679526	1
	Be	9	0.422	ug/L	0.028	6	5	893	5
	C	13		ug/L			58801	77609	2
	Cl	37		ug/L			3025336	3126148	0
>	Sc	45		ug/L			671354	689327	0
	V	51	28.455	ug/L	0.535	1	5156	414965	1
	V-1	51	28.609	ug/L	0.550	1	130	411726	1
	Cr	52	24.742	ug/L	0.264	1	15247	324384	0
	Cr	53	25.238	ug/L	0.346	1	115	35619	0
	Mn	55	633.499	ug/L	8.576	1	250	10900767	1
	Co	59	6.300	ug/L	0.127	2	40	84185	1
>	Ge	72		ug/L			457613	465963	1
	Ni	60	14.726	ug/L	0.521	3	22	41590	2
	Ni	62	15.883	ug/L	0.581	3	29	6333	3
	Cu	63	12.043	ug/L	0.364	3	58	76398	2
	Cu	65	12.506	ug/L	0.183	1	28	35852	0
	Zn	66	138.331	ug/L	1.351	0	143	233626	0
	Zn	67	142.198	ug/L	1.014	0	23	39141	0
	Zn	68	140.902	ug/L	2.519	1	137	171195	0
	As	75	10.361	ug/L	0.129	1	267	16574	0
	As-1	75	10.391	ug/L	0.173	1	8149	24632	0
	Se	82	< 0.035	ug/L	0.002	6	-5	0	68
	Se	78	0.237	ug/L	0.168	70	8278	8531	0
	Mo	98	0.435	ug/L	0.016	3	17	1983	2
	Y	89		ug/L			298590	352227	1
	Kr	83		ug/L			554	632	2
>	In	115		ug/L			979916	955334	1
	Ag	107	< 0.076	ug/L	0.003	3	15	1020	3
	Cd	111	1.710	ug/L	0.010	0	63	8014	0
	Cd	114	1.671	ug/L	0.015	0	30	19349	0
	Sb	121	< 0.081	ug/L	0.002	2	102	1289	3
	Sb	123	0.078	ug/L	0.005	6	72	953	4
	Ba	135	213.483	ug/L	2.849	1	11	884189	0
	Ba	137	214.617	ug/L	4.197	1	17	1534917	0
>	Tb	159		ug/L			1160798	1115462	1
	Tl	205	< 0.130	ug/L	0.001	0	51	4231	1
	Pb	208	47.375	ug/L	0.749	1	139	2009688	0
	Bi	209		ug/L			2367270	2207211	0
	Th	232	5.264	ug/L	0.097	1	21	212969	0
	U	238	0.558	ug/L	0.007	1	3	22949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	675572	1
[	Be	9	0.550	ug/L	0.013	2	5	1156	1
	C	13		ug/L			58801	77971	2
	Cl	37		ug/L			3025336	3147081	1
[>	Sc	45		ug/L			671354	703172	1
[	V	51	32.062	ug/L	0.406	1	5156	476269	1
[	V-1	51	32.326	ug/L	0.546	1	130	474503	1
[	Cr	52	27.375	ug/L	0.142	0	15247	364415	1
[	Cr	53	28.226	ug/L	0.734	2	115	40614	0
[	Mn	55	594.130	ug/L	7.263	1	250	10428099	1
[	Co	59	8.850	ug/L	0.146	1	40	120617	1
[>	Ge	72		ug/L			457613	455730	0
[	Ni	60	19.151	ug/L	0.263	1	22	52909	0
[	Ni	62	20.529	ug/L	0.421	2	29	7998	1
[	Cu	63	16.035	ug/L	0.314	1	58	99490	1
[	Cu	65	16.391	ug/L	0.437	2	28	45954	2
[	Zn	66	144.591	ug/L	2.035	1	143	238843	1
[	Zn	67	159.247	ug/L	2.659	1	23	42871	1
[	Zn	68	152.140	ug/L	1.222	0	137	180806	0
[	As	75	9.950	ug/L	0.191	1	267	15579	1
[	As-1	75	10.097	ug/L	0.203	2	8149	23640	0
[	Se	82	-0.183	ug/L	0.030	16	-5	-35	13
[	Se	78	0.703	ug/L	0.159	22	8278	8543	0
[	Mo	98	0.419	ug/L	0.009	2	17	1869	1
	Y	89		ug/L			298590	365735	0
	Kr	83		ug/L			554	759	3
[>	In	115		ug/L			979916	933523	0
[	Ag	107	0.142	ug/L	0.007	5	15	1863	4
[	Cd	111	0.776	ug/L	0.023	2	63	3586	2
[	Cd	114	0.702	ug/L	0.005	0	30	7967	1
[	Sb	121	0.045	ug/L	0.005	10	102	749	8
[	Sb	123	0.044	ug/L	0.005	11	72	550	10
[	Ba	135	351.617	ug/L	2.178	0	11	1423244	1
[	Ba	137	344.317	ug/L	2.932	0	17	2406621	0
[>	Tb	159		ug/L			1160798	1120669	0
[	Tl	205	0.134	ug/L	0.001	0	51	4373	0
[	Pb	208	29.457	ug/L	0.101	0	139	1255687	0
[	Bi	209		ug/L			2367270	2172168	0
[	Th	232	6.167	ug/L	0.020	0	21	250714	0
[	U	238	0.796	ug/L	0.001	0	3	32916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	653054	1
	Be	9	50.935	ug/L	0.279	0	5	103070	1
	C	13		ug/L			58801	55254	0
	Cl	37		ug/L			3025336	3246034	3
>	Sc	45		ug/L			671354	626960	0
	V	51	49.795	ug/L	0.110	0	5156	656929	0
	V-1	51	49.884	ug/L	0.231	0	130	652932	0
	Cr	52	50.578	ug/L	0.307	0	15247	588304	0
	Cr	53	50.871	ug/L	0.814	1	115	65200	1
	Mn	55	50.110	ug/L	0.318	0	250	784487	0
	Co	59	50.996	ug/L	1.214	2	40	619523	1
>	Ge	72		ug/L			457613	443132	1
	Ni	60	49.433	ug/L	1.488	3	22	132720	1
	Ni	62	50.141	ug/L	1.281	2	29	18948	1
	Cu	63	50.664	ug/L	1.762	3	58	305416	1
	Cu	65	50.750	ug/L	0.599	1	28	138271	0
	Zn	66	50.872	ug/L	1.308	2	143	81777	0
	Zn	67	52.294	ug/L	0.855	1	23	13702	1
	Zn	68	50.542	ug/L	1.778	3	137	58471	1
	As	75	49.700	ug/L	0.885	1	267	74621	0
	As-1	75	50.125	ug/L	1.089	2	8149	82817	0
	Se	82	50.158	ug/L	0.754	1	-5	8166	0
	Se	78	51.653	ug/L	1.517	2	8278	29332	0
	Mo	98	47.489	ug/L	0.999	2	17	204259	1
	Y	89		ug/L			298590	290226	1
	Kr	83		ug/L			554	535	3
>	In	115		ug/L			979916	917463	0
	Ag	107	47.357	ug/L	1.257	2	15	605947	2
	Cd	111	50.402	ug/L	0.091	0	63	225139	0
	Cd	114	50.757	ug/L	0.721	1	30	563681	0
	Sb	121	50.960	ug/L	0.237	0	102	722571	0
	Sb	123	50.197	ug/L	0.690	1	72	545445	0
	Ba	135	50.266	ug/L	1.072	2	11	199954	1
	Ba	137	50.190	ug/L	0.680	1	17	344786	1
>	Tb	159		ug/L			1160798	1065657	0
	Tl	205	52.641	ug/L	0.397	0	51	1617129	0
	Pb	208	51.463	ug/L	0.183	0	139	2085946	0
	Bi	209		ug/L			2367270	2151419	0
	Th	232	52.614	ug/L	0.287	0	21	2033951	0
	U	238	53.008	ug/L	0.660	1	3	2084247	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	638148	0
[	Be	9	0.001	ug/L	0.002	155	5	7	54
	C	13		ug/L			58801	54689	3
	Cl	37		ug/L			3025336	3047486	1
[>	Sc	45		ug/L			671354	617720	0
[	V	51	0.020	ug/L	0.003	14	5156	5007	1
[	V-1	51	-0.002	ug/L	0.002	99	130	97	23
[	Cr	52	0.062	ug/L	0.002	3	15247	14722	0
[	Cr	53	-0.010	ug/L	0.004	35	115	93	4
[	Mn	55	0.014	ug/L	0.002	18	250	441	9
[	Co	59	0.001	ug/L	0.001	57	40	49	15
[>	Ge	72		ug/L			457613	446360	1
[	Ni	60	-0.001	ug/L	0.003	234	22	19	39
[	Ni	62	0.143	ug/L	0.036	24	29	83	15
[	Cu	63	0.009	ug/L	0.001	6	58	113	2
[	Cu	65	0.002	ug/L	0.002	130	28	33	18
[	Zn	66	-0.007	ug/L	0.007	107	143	128	9
[	Zn	67	-0.003	ug/L	0.018	641	23	22	20
[	Zn	68	-0.006	ug/L	0.004	63	137	126	2
[	As	75	-0.006	ug/L	0.009	141	267	251	5
[	As-1	75	0.282	ug/L	0.051	18	8149	8373	0
[	Se	82	-0.028	ug/L	0.024	84	-5	-9	39
[	Se	78	1.033	ug/L	0.209	20	8278	8504	0
[	Mo	98	0.011	ug/L	0.002	21	17	64	15
	Y	89		ug/L			298590	281163	1
	Kr	83		ug/L			554	550	5
[>	In	115		ug/L			979916	926226	0
[	Ag	107	0.003	ug/L	0.001	48	15	47	33
[	Cd	111	0.005	ug/L	0.001	17	63	82	5
[	Cd	114	0.001	ug/L	0.001	81	30	45	30
[	Sb	121	0.057	ug/L	0.004	7	102	913	6
[	Sb	123	0.062	ug/L	0.004	6	72	745	5
[	Ba	135	0.004	ug/L	0.002	44	11	28	26
[	Ba	137	0.006	ug/L	0.003	48	17	54	34
[>	Tb	159		ug/L			1160798	1035087	0
[	Tl	205	0.007	ug/L	0.002	37	51	242	29
[	Pb	208	0.002	ug/L	0.000	16	139	207	6
[	Bi	209		ug/L			2367270	2178604	0
[	Th	232	0.082	ug/L	0.011	12	21	3089	13
[	U	238	0.001	ug/L	0.000	13	3	58	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:15:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 KJT
Mn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669406	0
	Be	9	0.407	ug/L	0.012	2	5	848	2
	C	13		ug/L			58801	80581	2
	Cl	37		ug/L			3025336	3193936	2
>	Sc	45		ug/L			671354	683285	0
	V	51	35.887	ug/L	0.251	0	5156	517430	0
	V-1	51	36.082	ug/L	0.246	0	130	514727	0
	Cr	52	21.298	ug/L	0.311	1	15247	278958	0
	Cr	53	21.901	ug/L	0.451	2	115	30657	2
	Mn	55	329.072	ug/L	3.730	1	250	5613192	1
	Co	59	7.080	ug/L	0.204	2	40	93768	2
>	Ge	72		ug/L			457613	455954	0
	Ni	60	15.809	ug/L	0.272	1	22	43704	2
	Ni	62	17.308	ug/L	0.370	2	29	6751	2
	Cu	63	20.220	ug/L	0.031	0	58	125500	0
	Cu	65	20.890	ug/L	0.754	3	28	58592	3
	Zn	66	108.758	ug/L	1.460	1	143	179787	1
	Zn	67	108.959	ug/L	0.867	0	23	29354	0
	Zn	68	108.184	ug/L	1.985	1	137	128679	2
	As	75	7.705	ug/L	0.089	1	267	12132	1
	As-1	75	7.849	ug/L	0.055	0	8149	20194	0
	Se	82	<0.414	ug/L	0.043	10	-5	64	10
	Se	78	1.044	ug/L	0.214	20	8278	8691	0
	Mo	98	0.459	ug/L	0.011	2	17	2048	1
	Y	89		ug/L			298590	400196	1
	Kr	83		ug/L			554	625	2
>	In	115		ug/L			979916	930629	0
	Ag	107	<0.157	ug/L	0.002	1	15	2056	1
	Cd	111	1.489	ug/L	0.020	1	63	6806	1
	Cd	114	1.440	ug/L	0.020	1	30	16254	1
	Sb	121	<0.113	ug/L	0.005	4	102	1716	4
	Sb	123	0.114	ug/L	0.009	7	72	1327	7
	Ba	135	82.352	ug/L	0.496	0	11	332298	0
	Ba	137	81.904	ug/L	0.850	1	17	570729	1
>	Tb	159		ug/L			1160798	1100079	1
	Tl	205	<0.137	ug/L	0.004	3	51	4382	2
	Pb	208	72.029	ug/L	0.789	1	139	3013558	1
	Bi	209		ug/L			2367270	2170815	0
	Th	232	4.886	ug/L	0.098	1	21	194989	1
	U	238	2.901	ug/L	0.038	1	3	117734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:19:56
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669174	2
	Be	9	0.680	ug/L	0.002	0	5	1415	2
	C	13		ug/L			58801	70255	3
	Cl	37		ug/L			3025336	3104801	1
>	Sc	45		ug/L			671354	700996	0
	V	51	37.182	ug/L	1.136	3	5156	549741	2
	V-1	51	37.576	ug/L	1.008	2	130	549876	1
	Cr	52	29.206	ug/L	0.908	3	15247	386501	2
	Cr	53	30.477	ug/L	0.725	2	115	43717	1
	Mn	55	523.625	ug/L	1.065	0	250	9162946	0
	Co	59	8.756	ug/L	0.220	2	40	118974	2
>	Ge	72		ug/L			457613	451392	1
	Ni	60	24.045	ug/L	0.747	3	22	65780	2
	Ni	62	25.669	ug/L	0.712	2	29	9896	1
	Cu	63	22.795	ug/L	0.366	1	58	140050	1
	Cu	65	23.468	ug/L	0.311	1	28	65150	0
	Zn	66	122.207	ug/L	4.215	3	143	199922	2
	Zn	67	136.089	ug/L	4.558	3	23	36282	2
	Zn	68	130.021	ug/L	3.751	2	137	153037	1
	As	75	9.811	ug/L	0.105	1	267	15218	0
	As-1	75	9.965	ug/L	0.182	1	8149	23214	0
	Se	82	U -0.163	ug/L	0.058	35	-5	-32	28
	Se	78	0.820	ug/L	0.289	35	8278	8510	0
	Mo	98	0.375	ug/L	0.017	4	17	1660	4
	Y	89		ug/L			298590	371868	1
	Kr	83		ug/L			554	789	1
>	In	115		ug/L			979916	924672	0
	Ag	107	U 0.132	ug/L	0.001	1	15	1718	1
	Cd	111	0.775	ug/L	0.020	2	63	3546	2
	Cd	114	0.684	ug/L	0.020	2	30	7680	2
	Sb	121	U 0.036	ug/L	0.002	5	102	608	3
	Sb	123	0.032	ug/L	0.005	14	72	418	11
	Ba	135	298.166	ug/L	6.317	2	11	1195360	1
	Ba	137	292.927	ug/L	3.240	1	17	2028058	0
>	Tb	159		ug/L			1160798	1096148	1
	Tl	205	U 0.142	ug/L	0.002	1	51	4546	2
	Pb	208	31.727	ug/L	0.426	1	139	1322698	0
	Bi	209		ug/L			2367270	2152836	0
	Th	232	8.735	ug/L	0.049	0	21	347366	1
	U	238	0.914	ug/L	0.009	0	3	36970	1

11.16.12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:24:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	657743	1
	Be	9	0.507	ug/L	0.033	6	5	1037	4
	C	13		ug/L			58801	76553	3
	Cl	37		ug/L			3025336	3137143	1
>	Sc	45		ug/L			671354	685808	1
	V	51	17.329	ug/L	0.328	1	5156	253482	1
	V-1	51	17.346	ug/L	0.317	1	130	248413	1
	Cr	52	15.116	ug/L	0.170	1	15247	203231	1
	Cr	53	15.167	ug/L	0.140	0	115	21344	1
	Mn	55	667.237	ug/L	18.091	2	250	11420270	1
	Co	59	5.260	ug/L	0.164	3	40	69955	4
>	Ge	72		ug/L			457613	456304	2
	Ni	60	14.100	ug/L	0.124	0	22	39006	2
	Ni	62	15.289	ug/L	0.571	3	29	5968	1
	Cu	63	11.816	ug/L	0.138	1	58	73403	1
	Cu	65	12.204	ug/L	0.355	2	28	34249	1
	Zn	66	128.498	ug/L	4.057	3	143	212455	1
	Zn	67	139.135	ug/L	4.668	3	23	37485	0
	Zn	68	137.508	ug/L	6.747	4	137	163512	2
	As	75	8.079	ug/L	0.230	2	267	12711	1
	As-1	75	8.199	ug/L	0.400	4	8149	20738	0
	Se	82	-0.106	ug/L	0.080	75	-5	-23	60
	Se	78	0.566	ug/L	0.704	124	8278	8490	0
	Mo	98	0.340	ug/L	0.016	4	17	1523	2
	Y	89		ug/L			298590	383551	3
	Kr	83		ug/L			554	696	3
>	In	115		ug/L			979916	945372	0
	Ag	107	0.087	ug/L	0.003	3	15	1160	3
	Cd	111	1.873	ug/L	0.025	1	63	8677	1
	Cd	114	1.797	ug/L	0.047	2	30	20592	2
	Sb	121	0.073	ug/L	0.002	2	102	1162	2
	Sb	123	0.074	ug/L	0.004	4	72	903	4
	Ba	135	288.873	ug/L	1.308	0	11	1184091	0
	Ba	137	280.728	ug/L	1.889	0	17	1987154	0
>	Tb	159		ug/L			1160798	1119393	0
	Tl	205	-0.146	ug/L	0.003	2	51	4753	2
	Pb	208	106.225	ug/L	0.593	0	139	4522433	0
	Bi	209		ug/L			2367270	2183517	0
	Th	232	4.535	ug/L	0.012	0	21	184151	0
	U	238	0.575	ug/L	0.013	2	3	23754	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:28:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn~~ Pb Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660277	1
	Be	9	0.123	ug/L	0.008	6	5	257	5
	C	13		ug/L			58801	63435	0
	Cl	37		ug/L			3025336	3067991	4
>	Sc	45		ug/L			671354	662027	1
	V	51	5.902	ug/L	0.083	1	5156	86689	1
	V-1	51	6.017	ug/L	0.092	1	130	83258	0
	Cr	52	10.575	ug/L	0.191	1	15247	141756	0
	Cr	53	10.963	ug/L	0.304	2	115	14921	1
	Mn	55	139.939	ug/L	1.097	0	250	2312815	1
	Co	59	2.113	ug/L	0.057	2	40	27145	1
>	Ge	72		ug/L			457613	449855	1
	Ni	60	5.476	ug/L	0.094	1	22	14948	0
	Ni	62	5.912	ug/L	0.180	3	29	2294	4
	Cu	63	6.348	ug/L	0.157	2	58	38914	2
	Cu	65	6.577	ug/L	0.087	1	28	18218	1
	Zn	66	114.834	ug/L	4.549	3	143	187227	2
	Zn	67	108.058	ug/L	1.654	1	23	28723	1
	Zn	68	111.601	ug/L	3.758	3	137	130930	2
	As	75	4.779	ug/L	0.054	1	267	7523	1
	As-1	75	5.014	ug/L	0.169	3	8149	15620	0
	Se	82	0.078	ug/L	0.022	27	-5	7	47
	Se	78	0.941	ug/L	0.446	47	8278	8531	1
	Mo	98	0.083	ug/L	0.006	7	17	377	7
	Y	89		ug/L			298590	324782	0
	Kr	83		ug/L			554	560	2
>	In	115		ug/L			979916	934916	1
	Ag	107	0.057	ug/L	0.002	3	15	760	3
	Cd	111	2.931	ug/L	0.051	1	63	13398	1
	Cd	114	2.948	ug/L	0.061	2	30	33380	0
	Sb	121	0.053	ug/L	0.000	0	102	856	1
	Sb	123	0.054	ug/L	0.004	8	72	665	8
	Ba	135	43.224	ug/L	0.522	1	11	175226	1
	Ba	137	42.392	ug/L	0.102	0	17	296765	0
>	Tb	159		ug/L			1160798	1072424	0
	Tl	205	0.111	ug/L	0.001	0	51	3477	1
	Pb	208	84.415	ug/L	0.475	0	139	3443084	0
	Bi	209		ug/L			2367270	2206189	0
	Th	232	1.240	ug/L	0.010	0	21	48239	0
	U	238	0.166	ug/L	0.003	1	3	6578	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:32:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	665866	0
	Be	9	0.564	ug/L	0.003	0	5	1168	0
	C	13		ug/L			58801	86475	4
	Cl	37		ug/L			3025336	3153528	0
>	Sc	45		ug/L			671354	705952	0
	V	51	28.815	ug/L	0.566	1	5156	430315	1
	V-1	51	29.088	ug/L	0.289	0	130	428742	0
	Cr	52	50.609	ug/L	1.449	2	15247	662765	2
	Cr	53	51.554	ug/L	1.592	3	115	74389	2
	Mn	55	644.019	ug/L	8.250	1	250	11348910	0
	Co	59	9.783	ug/L	0.085	0	40	133878	1
>	Ge	72		ug/L			457613	449480	0
	Ni	60	27.394	ug/L	0.094	0	22	74637	0
	Ni	62	29.370	ug/L	1.047	3	29	11273	3
	Cu	63	31.639	ug/L	0.429	1	58	193560	1
	Cu	65	32.121	ug/L	0.736	2	28	88797	2
	Zn	66	550.649	ug/L	8.791	1	143	896736	1
	Zn	67	524.104	ug/L	4.641	0	23	139110	1
	Zn	68	544.587	ug/L	8.982	1	137	637972	1
	As	75	23.702	ug/L	0.270	1	267	36241	1
	As-1	75	23.922	ug/L	0.302	1	8149	44284	1
	Se	82	0.176	ug/L	0.105	59	-5	23	72
	Se	78	1.244	ug/L	0.173	13	8278	8652	0
	Mo	98	0.425	ug/L	0.017	3	17	1870	3
	Y	89		ug/L			298590	439800	0
	Kr	83		ug/L			554	728	3
>	In	115		ug/L			979916	978306	1
	Ag	107	0.250	ug/L	0.010	4	15	3429	3
	Cd	111	13.687	ug/L	0.071	0	63	65234	0
	Cd	114	13.694	ug/L	0.178	1	30	162189	0
	Sb	121	0.245	ug/L	0.010	3	102	3806	2
	Sb	123	0.238	ug/L	0.005	1	72	2832	1
	Ba	135	208.286	ug/L	5.230	2	11	883366	1
	Ba	137	207.928	ug/L	3.046	1	17	1522968	0
>	Tb	159		ug/L			1160798	1122794	0
	Tl	205	0.522	ug/L	0.008	1	51	16955	1
	Pb	208	390.055	ug/L	2.097	0	139	16656267	0
	Bi	209		ug/L			2367270	2197146	0
	Th	232	5.886	ug/L	0.058	0	21	239765	0
	U	238	0.802	ug/L	0.005	0	3	33236	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:36:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn~~ 11.16.12 KW

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	682210	1
	Be	**9**	**0.946**	ug/L	0.036	3	5	2003	2
	C	**13**		ug/L			58801	88206	3
	Cl	**37**		ug/L			3025336	3220928	1
>	**Sc**	**45**		ug/L			671354	714096	1
	V	**51**	**28.808**	ug/L	0.700	2	5156	435110	1
	V-1	**51**	**28.997**	ug/L	0.762	2	130	432258	1
	Cr	**52**	**28.944**	ug/L	0.532	1	15247	390315	0
	Cr	**53**	**29.561**	ug/L	0.615	2	115	43193	0
	Mn	**55**	**1267.402**	ug/L	30.160	2	250	22588239	1
	Co	**59**	**17.782**	ug/L	0.060	0	40	246102	1
>	**Ge**	**72**		ug/L			457613	455857	0
	Ni	**60**	**41.561**	ug/L	0.607	1	22	114833	1
	Ni	**62**	**43.462**	ug/L	0.815	1	29	16904	1
	Cu	**63**	**34.594**	ug/L	0.774	2	58	214645	2
	Cu	**65**	**35.502**	ug/L	0.285	0	28	99528	1
	Zn	**66**	**189.077**	ug/L	0.787	0	143	312378	0
	Zn	**67**	**196.555**	ug/L	3.707	1	23	52923	1
	Zn	**68**	**199.365**	ug/L	5.140	2	137	236945	2
	As	**75**	**17.851**	ug/L	0.052	0	267	27747	0
	As-1	**75**	**17.977**	ug/L	0.026	0	8149	35768	0
	Se	**82**	**-0.016**	ug/L	0.026	157	-5	-8	53
	Se	**78**	**0.951**	ug/L	0.108	11	8278	8651	0
	Mo	**98**	**1.116**	ug/L	0.014	1	17	4956	0
	Y	**89**		ug/L			298590	491114	1
	Kr	**83**		ug/L			554	858	2
>	**In**	**115**		ug/L			979916	934135	2
	Ag	**107**	**0.186**	ug/L	0.007	3	15	2440	3
	Cd	**111**	**3.351**	ug/L	0.084	2	63	15288	0
	Cd	**114**	**3.182**	ug/L	0.054	1	30	36003	0
	Sb	**121**	**0.130**	ug/L	0.005	3	102	1977	1
	Sb	**123**	**0.135**	ug/L	0.004	3	72	1556	1
	Ba	**135**	**248.316**	ug/L	8.423	3	11	1005223	1
	Ba	**137**	**249.377**	ug/L	4.231	1	17	1743825	1
>	**Tb**	**159**		ug/L			1160798	1122418	2
	Tl	**205**	**0.236**	ug/L	0.010	4	51	7668	1
	Pb	**208**	**106.027**	ug/L	3.003	2	139	4524052	0
	Bi	**209**		ug/L			2367270	2143333	1
	Th	**232**	**7.142**	ug/L	0.123	1	21	290753	1
	U	**238**	**1.081**	ug/L	0.033	3	3	44751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:42:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~TP Mn~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	654111	1
	Be	9	0.564	ug/L	0.019	3	5	1148	1
	C	13		ug/L			58801	77009	2
	Cl	37		ug/L			3025336	3032412	1
>	Sc	45		ug/L			671354	695448	1
	V	51	30.830	ug/L	1.145	3	5156	453066	2
	V-1	51	30.859	ug/L	1.219	3	130	447937	2
	Cr	52	17.705	ug/L	0.178	1	15247	238676	0
	Cr	53	17.765	ug/L	0.332	1	115	25330	0
	Mn	55	863.901	ug/L	23.840	2	250	14994078	1
	Co	59	7.032	ug/L	0.257	3	40	94793	3
>	Ge	72		ug/L			457613	456027	0
	Ni	60	13.888	ug/L	0.152	1	22	38399	0
	Ni	62	15.079	ug/L	0.504	3	29	5886	3
	Cu	63	12.199	ug/L	0.323	2	58	75746	2
	Cu	65	12.739	ug/L	0.236	1	28	35747	2
	Zn	66	184.237	ug/L	6.900	3	143	304457	3
	Zn	67	186.502	ug/L	3.339	1	23	50238	2
	Zn	68	186.679	ug/L	2.744	1	137	221961	1
	As	75	14.218	ug/L	0.042	0	267	22163	0
	As-1	75	14.461	ug/L	0.082	0	8149	30370	0
	Se	82	-0.107	ug/L	0.067	62	-5	-23	47
	Se	78	1.034	ug/L	0.150	14	8278	8689	0
	Mo	98	0.389	ug/L	0.010	2	17	1737	3
	Y	89		ug/L			298590	366460	1
	Kr	83		ug/L			554	719	3
>	In	115		ug/L			979916	940423	1
	Ag	107	0.094	ug/L	0.003	3	15	1251	2
	Cd	111	2.428	ug/L	0.092	3	63	11170	2
	Cd	114	2.391	ug/L	0.070	2	30	27236	1
	Sb	121	0.185	ug/L	0.007	3	102	2791	2
	Sb	123	0.187	ug/L	0.008	4	72	2149	2
	Ba	135	247.443	ug/L	8.280	3	11	1008614	1
	Ba	137	245.503	ug/L	7.146	2	17	1728208	1
>	Tb	159		ug/L			1160798	1100374	1
	Tl	205	0.217	ug/L	0.006	2	51	6922	1
	Pb	208	125.130	ug/L	3.348	2	139	5235412	1
	Bi	209		ug/L			2367270	2156542	0
	Th	232	5.759	ug/L	0.225	3	21	229816	2
	U	238	0.550	ug/L	0.010	1	3	22321	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:46:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AC MJT~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	667813	2
[	Be	9	1.028	ug/L	0.009	0	5	2132	3
	C	13		ug/L			58801	70718	1
	Cl	37		ug/L			3025336	3124918	1
[>	Sc	45		ug/L			671354	728616	1
[	V	51	35.473	ug/L	0.502	1	5156	545479	2
[	V-1	51	35.701	ug/L	0.656	1	130	543057	1
[	Cr	52	38.421	ug/L	0.236	0	15247	523315	1
[	Cr	53	39.173	ug/L	1.085	2	115	58360	1
[	Mn	55	794.786	ug/L	15.153	1	250	14453630	0
[	Co	59	9.691	ug/L	0.212	2	40	136840	0
[>	Ge	72		ug/L			457613	452968	1
[	Ni	60	31.588	ug/L	0.721	2	22	86714	1
[	Ni	62	34.544	ug/L	1.143	3	29	13355	2
[	Cu	63	35.520	ug/L	0.870	2	58	218945	1
[	Cu	65	36.683	ug/L	0.638	1	28	102180	1
[	Zn	66	172.125	ug/L	6.565	3	143	282507	2
[	Zn	67	185.298	ug/L	2.461	1	23	49575	0
[	Zn	68	179.224	ug/L	3.091	1	137	211659	0
[	As	75	10.408	ug/L	0.217	2	267	16184	1
[	As-1	75	10.593	ug/L	0.260	2	8149	24253	0
[	Se	82	-0.098	ug/L	0.020	20	-5	-21	15
[	Se	78	1.243	ug/L	0.188	15	8278	8718	0
[	Mo	98	0.543	ug/L	0.006	1	17	2404	1
	Y	89		ug/L			298590	554725	1
	Kr	83		ug/L			554	925	3
[>	In	115		ug/L			979916	924382	1
[	Ag	107	0.476	ug/L	0.009	1	15	6152	1
[	Cd	111	1.064	ug/L	0.038	3	63	4846	3
[	Cd	114	0.851	ug/L	0.021	2	30	9554	1
[	Sb	121	0.042	ug/L	0.001	2	102	692	2
[	Sb	123	0.042	ug/L	0.002	4	72	522	3
[	Ba	135	298.621	ug/L	4.371	1	11	1196747	0
[	Ba	137	290.337	ug/L	2.599	0	17	2009421	0
[>	Tb	159		ug/L			1160798	1126736	0
[	Tl	205	0.186	ug/L	0.006	3	51	6082	2
[	Pb	208	26.887	ug/L	0.265	0	139	1152291	0
[	Bi	209		ug/L			2367270	2133097	0
[	Th	232	8.379	ug/L	0.115	1	21	342472	0
[	U	238	2.031	ug/L	0.025	1	3	84421	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 400
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:50:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ba~~ Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	636136	1
[	Be	9	0.041	ug/L	0.003	7	5	85	7
	C	13		ug/L			58801	61326	2
	Cl	37		ug/L			3025336	3058642	2
[>	Sc	45		ug/L			671354	632888	0
[	V	51	1.298	ug/L	0.033	2	5156	22017	1
[	V-1	51	1.304	ug/L	0.035	2	130	17341	2
[	Cr	52	1.003	ug/L	0.030	3	15247	25864	1
[	Cr	53	1.021	ug/L	0.022	2	115	1427	2
[	Mn	55	124.604	ug/L	3.450	2	250	1968617	2
[	Co	59	0.386	ug/L	0.001	0	40	4772	0
[>	Ge	72		ug/L			457613	444686	1
[	Ni	60	0.797	ug/L	0.019	2	22	2168	1
[	Ni	62	0.903	ug/L	0.069	7	29	371	8
[	Cu	63	1.174	ug/L	0.030	2	58	7157	1
[	Cu	65	1.198	ug/L	0.039	3	28	3302	3
[	Zn	66	25.175	ug/L	0.267	1	143	40689	0
[	Zn	67	25.964	ug/L	0.638	2	23	6838	1
[	Zn	68	25.970	ug/L	0.246	0	137	30224	0
[	As	75	0.899	ug/L	0.030	3	267	1609	2
[	As-1	75	1.215	ug/L	0.081	6	8149	9740	0
[	Se	82	0.089	ug/L	0.059	65	-5	9	102
[	Se	78	1.165	ug/L	0.239	20	8278	8526	0
[	Mo	98	0.017	ug/L	0.001	4	17	91	3
	Y	89		ug/L			298590	298434	1
	Kr	83		ug/L			554	506	1
[>	In	115		ug/L			979916	941485	1
[	Ag	107	0.009	ug/L	0.000	3	15	129	2
[	Cd	111	0.288	ug/L	0.005	1	63	1379	1
[	Cd	114	0.289	ug/L	0.009	3	30	3318	1
[	Sb	121	0.011	ug/L	0.002	16	102	256	9
[	Sb	123	0.012	ug/L	0.002	19	72	207	11
[	Ba	135	37.630	ug/L	0.775	2	11	153598	0
[	Ba	137	37.562	ug/L	0.159	0	17	264796	0
[>	Tb	159		ug/L			1160798	1052930	0
[	Tl	205	0.017	ug/L	0.001	3	51	563	3
[	Pb	208	13.938	ug/L	0.179	1	139	558265	1
[	Bi	209		ug/L			2367270	2205197	0
[	Th	232	0.296	ug/L	0.003	1	21	11334	1
[	U	238	0.028	ug/L	0.001	2	3	1087	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	653170	1
	Be	9	0.761	ug/L	0.013	1	5	1545	1
	C	13		ug/L			58801	81288	3
	Cl	37		ug/L			3025336	3033576	0
>	Sc	45		ug/L			671354	706731	2
	V	51	23.449	ug/L	1.012	4	5156	351351	2
	V-1	51	23.534	ug/L	0.987	4	130	347072	2
	Cr	52	16.990	ug/L	0.519	3	15247	233317	0
	Cr	53	17.253	ug/L	0.439	2	115	24996	1
	Mn	55	2150.704	ug/L	61.340	2	250	37926409	0
	Co	59	6.627	ug/L	0.107	1	40	90797	2
>	Ge	72		ug/L			457613	456813	1
	Ni	60	14.680	ug/L	0.036	0	22	40660	1
	Ni	62	15.894	ug/L	0.225	1	29	6214	2
	Cu	63	21.081	ug/L	0.744	3	58	131045	1
	Cu	65	22.443	ug/L	0.785	3	28	63083	5
	Zn	66	449.072	ug/L	12.922	2	143	743120	2
	Zn	67	461.213	ug/L	1.219	0	23	124416	1
	Zn	68	464.143	ug/L	13.107	2	137	552468	1
	As	75	16.738	ug/L	0.287	1	267	26085	0
	As-1	75	16.850	ug/L	0.367	2	8149	34099	0
	Se	82	U 0.088	ug/L	0.205	232	-5	9	378
	Se	78	0.728	ug/L	0.390	53	8278	8572	0
	Mo	98	0.375	ug/L	0.020	5	17	1677	3
	Y	89		ug/L			298590	396305	2
	Kr	83		ug/L			554	710	11
>	In	115		ug/L			979916	958845	1
	Ag	107	U 0.160	ug/L	0.009	5	15	2153	4
	Cd	111	5.550	ug/L	0.089	1	63	25960	0
	Cd	114	5.416	ug/L	0.073	1	30	62884	0
	Sb	121	0.261	ug/L	0.009	3	102	3971	1
	Sb	123	0.258	ug/L	0.005	2	72	2998	3
	Ba	135	748.464	ug/L	13.025	1	11	3111128	0
	Ba	137	743.815	ug/L	14.705	1	17	5339048	0
>	Tb	159		ug/L			1160798	1120387	0
	Tl	205	0.303	ug/L	0.003	0	51	9821	1
	Pb	208	257.186	ug/L	2.655	1	139	10958566	0
	Bi	209		ug/L			2367270	2196515	0
	Th	232	5.193	ug/L	0.079	1	21	211053	0
	U	238	0.506	ug/L	0.003	0	3	20936	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635238 ✓	1
	Be	9	54.646	ug/L	1.333	2	5	107543	1
	C	13		ug/L			58801	56029	2
	Cl	37		ug/L			3025336	3144406	1
>	Sc	45		ug/L			671354	623256 ✓	1
	V	51	50.192	ug/L	0.175	0	5156	658203	0
	V-1	51	50.479	ug/L	0.474	0	130	656770	0
	Cr	52	50.519	ug/L	0.540	1	15247	584145	1
	Cr	53	51.457	ug/L	0.988	1	115	65550	1
	Mn	55	50.346	ug/L	0.069	0	250	783508	1
	Co	59	51.843	ug/L	1.826	3	40	626010	2
>	Ge	72		ug/L			457613	453894 ✓	1
	Ni	60	48.799	ug/L	0.890	1	22	134224	0
	Ni	62	50.125	ug/L	1.243	2	29	19407	2
	Cu	63	49.427	ug/L	0.655	1	58	305288	0
	Cu	65	49.250	ug/L	0.593	1	28	137449	0
	Zn	66	49.719	ug/L	1.167	2	143	81876	1
	Zn	67	50.015	ug/L	0.460	0	23	13426	1
	Zn	68	49.375	ug/L	0.301	0	137	58532	0
	As	75	48.609	ug/L	0.318	0	267	74773	1
	As-1	75	48.872	ug/L	0.661	1	8149	82922	0
	Se	82	49.155	ug/L	0.122	0	-5	8198	1
	Se	78	50.030	ug/L	1.282	2	8278	29361	0
	Mo	98	46.368	ug/L	0.696	1	17	204295	1
	Y	89		ug/L			298590	287369	0
	Kr	83		ug/L			554	528	2
>	In	115		ug/L			979916	909941 ✓	2
	Ag	107	48.363	ug/L	0.269	0	15	613832	2
	Cd	111	50.995	ug/L	0.236	0	63	225903	1
	Cd	114	51.124	ug/L	0.586	1	30	563049	0
	Sb	121	50.900	ug/L	0.971	1	102	715631	0
	Sb	123	50.958	ug/L	0.807	1	72	549082	0
	Ba	135	50.546	ug/L	0.847	1	11	199395	0
	Ba	137	50.006	ug/L	0.792	1	17	340645	0
>	Tb	159		ug/L			1160798	1051076 ✓	0
	Tl	205	52.483	ug/L	0.137	0	51	1590218	0
	Pb	208	51.498	ug/L	0.261	0	139	2058738	0
	Bi	209		ug/L			2367270	2129498	0
	Th	232	52.911	ug/L	0.476	0	21	2017351	0
	U	238	53.047	ug/L	0.501	0	3	2057180	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:05:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635099 ✓	1
	Be	9	0.002	ug/L	0.001	56	5	9	24
	C	13		ug/L			58801	55687	1
	Cl	37		ug/L			3025336	3023678	0
>	Sc	45		ug/L			671354	615760 ✓	1
	V	51	0.030	ug/L	0.012	40	5156	5115	4
	V-1	51	0.005	ug/L	0.000	3	130	187	1
	Cr	52	0.097	ug/L	0.043	44	15247	15064	4
	Cr	53	0.016	ug/L	0.004	24	115	126	4
	Mn	55	0.037	ug/L	0.045	123	250	797	88
	Co	59	0.002	ug/L	0.002	82	40	65	36
>	Ge	72		ug/L			457613	436174 ✓	0
	Ni	60	0.001	ug/L	0.002	247	22	23	21
	Ni	62	0.075	ug/L	0.022	29	29	56	14
	Cu	63	0.007	ug/L	0.002	21	58	99	9
	Cu	65	0.003	ug/L	0.001	20	28	36	5
	Zn	66	0.003	ug/L	0.007	225	143	141	8
	Zn	67	0.022	ug/L	0.018	80	23	28	15
	Zn	68	0.010	ug/L	0.003	25	137	142	2
	As	75	-0.012	ug/L	0.013	107	267	237	7
	As-1	75	0.412	ug/L	0.066	16	8149	8373	0
	Se	82	0.042	ug/L	0.018	41	-5	1	170
	Se	78	1.543	ug/L	0.228	14	8278	8517	0
	Mo	98	0.007	ug/L	0.003	35	17	46	23
	Y	89		ug/L			298590	280384	1
	Kr	83		ug/L			554	512	1
>	In	115		ug/L			979916	898103 ✓	1
	Ag	107	0.002	ug/L	0.001	44	15	38	27
	Cd	111	0.006	ug/L	0.005	84	63	82	24
	Cd	114	0.002	ug/L	0.001	65	30	49	27
	Sb	121	0.054	ug/L	0.003	5	102	838	3
	Sb	123	0.053	ug/L	0.005	9	72	629	7
	Ba	135	0.013	ug/L	0.016	128	11	60	104
	Ba	137	0.010	ug/L	0.013	124	17	83	100
>	Tb	159		ug/L			1160798	1002039 ✓	0
	Tl	205	0.010	ug/L	0.005	50	51	319	43
	Pb	208	0.006	ug/L	0.006	98	139	364	65
	Bi	209		ug/L			2367270	2132633	0
	Th	232	0.087	ug/L	0.004	4	21	3194	5
	U	238	0.002	ug/L	0.002	81	3	81	77

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-14-12 Analyst: BA/AA

LR Date: 7-30-12 Page: 1 of 5

All corrections made by analyst unless otherwise noted. BA 11/15/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD0			2992-3
		2			2991-4
		3			-5
		4			-6
		5			-7
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VR31 MB1	SWC	2	
		VQ47 E	TWC		
	✓	VR31 ~~AL~~ zzzzzz	SWC	10	
	✓	A		2	A1 >LR - dilute
	✓	ADUP		✓	
	✓	ASPK		✓	
	✓	~~APOST~~ zzzzzz		✓	
		B			
		C			
		MB1SPK		✓	
		CCV2			
		CCB2			

VR31 : 00149

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Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-14-12 Analyst: BA/AA

LR Date: — Page: 2 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR31 D	SWC	2	
		E			
	✓	F			Fe > ~~LR~~ LR BA 11/14/12
	✓	G			Al, Fe > LR
		H			
		I			
		J			
	✓	K			Fe > LR
	✓	L			
		CCV3			
		CCB3			
		VR31 A-L	SWC	25	
		A		5	
		ADUP		✓	
		ASPK		✓	Al, Fe STL
		APOST		✓	Fe STL
		F			
		G			
		K			
		L			
		CCV4			
		CCB4			
		CRI			
		ICSA			

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Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-14-12 Analyst: BA/AA

LR Date: — Page: 3 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		ICSAB			
		CCV5			
		CCB5			End Pkg
		VS03 MB2	LEN	5	
		Bt			
		Ct			
		Dt			
		Et			
		Ft			
		Gt			
		AtDUP			
		At			
		AtSPK	BAT		
		CCV6		11/15/12	
		CCB6			Ca > RL (N.R.)
		VS03 Ht	LEN	5	
		It			
		Jt			
		Kt			
		CCV7			
		CCB7			
		VQ68 MB	TWC		
		VQ85 MB			
		VQ68 A			

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-14-12

ICP-2	Analyst BA/AA 11/15/12	Peer ✱11-15✱	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	See log VR31
Analytic Spikes	BA 11/15/12 ✓	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF VR85

Analysis Begun

Start Time: 11/14/2012 10:43:43 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/14/2012 7:50:58 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121114
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC110912.iec
Method Description: 12Axial Elements
Method Last Saved: 11/14/2012 10:41:38 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/14/2012 10:43:44 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2481436.4	8418.84	0.34%	100.0	%
ScR 361.383	321089.6	2875.41	0.90%	100.0	%
Ag 328.068†	-110.2	70.97	64.40%	[0.00]	mg/L
Al 308.215†	159.9	7.92	4.95%	[0.00]	mg/L
As 188.979†	-7.4	1.12	15.23%	[0.00]	mg/L
B 249.677†	43.4	4.00	9.23%	[0.00]	mg/L

Ba 233.527†	17.4	5.58	32.00%	[0.00] mg/L
Be 313.042†	920.7	21.39	2.32%	[0.00] mg/L
Ca 317.933†	248.1	22.70	9.15%	[0.00] mg/L
Cd 228.802†	338.2	3.76	1.11%	[0.00] mg/L
Co 228.616†	-82.4	7.96	9.66%	[0.00] mg/L
Cr 267.716†	-84.4	2.33	2.76%	[0.00] mg/L
Cu 324.752†	2935.3	56.99	1.94%	[0.00] mg/L
Fe 273.955†	26.5	2.58	9.71%	[0.00] mg/L
K 766.490†	548.8	43.40	7.91%	[0.00] mg/L
Mg 279.077†	97.3	1.11	1.14%	[0.00] mg/L
Mn 257.610†	144.9	1.20	0.83%	[0.00] mg/L
Mo 202.031†	64.2	1.58	2.46%	[0.00] mg/L
Na 589.592†	-205.0	36.01	17.56%	[0.00] mg/L
Na 330.237†	-217.0	12.77	5.88%	[0.00] mg/L
Ni 231.604†	-26.7	6.48	24.26%	[0.00] mg/L
Pb 220.353†	62.8	9.74	15.52%	[0.00] mg/L
Sb 206.836†	62.3	2.41	3.87%	[0.00] mg/L
Se 196.026†	-44.3	2.19	4.93%	[0.00] mg/L
Si 288.158†	64.3	1.05	1.63%	[0.00] mg/L
Sn 189.927†	-0.2	1.19	639.41%	[0.00] mg/L
Sr 421.552†	310.3	5.97	1.92%	[0.00] mg/L
Ti 334.903†	-54.7	9.77	17.86%	[0.00] mg/L
Tl 190.801†	-41.9	5.68	13.55%	[0.00] mg/L
V 292.402†	179.9	21.65	12.04%	[0.00] mg/L
Zn 206.200†	26.1	1.64	6.29%	[0.00] mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 11/14/2012 10:47:59 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2492832.1	37349.12	1.50%	100.5	%
ScR 361.383	325125.1	5341.20	1.64%	101.3	%
Ba 233.527†	48084.6	1588.80	3.30%	[10]	mg/L
Cd 228.802†	308794.8	6996.31	2.27%	[10]	mg/L
Co 228.616†	351923.8	8271.47	2.35%	[10]	mg/L
Cr 267.716†	62866.8	1778.05	2.83%	[10]	mg/L
Cu 324.752†	2549065.3	47800.71	1.88%	[10]	mg/L
Mn 257.610†	339106.9	9077.76	2.68%	[10]	mg/L
V 292.402†	1341312.2	30549.37	2.28%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/14/2012 10:50:00 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2446014.4	9822.06	0.40%	98.57	%
ScR 361.383	314123.8	7716.15	2.46%	97.83	%
Ag 328.068†	178145.9	923.05	0.52%	[1.0]	mg/L
As 188.979†	18519.1	131.43	0.71%	[10]	mg/L
B 249.677†	78911.0	1551.88	1.97%	[10]	mg/L
Be 313.042†	3270969.8	58949.33	1.80%	[5.0]	mg/L
Na 589.592†	646570.1	16783.55	2.60%	[50]	mg/L
Ni 231.604†	42674.6	788.99	1.85%	[10]	mg/L

Pb 220.353†	77825.3	482.73	0.62%	[10] mg/L
Se 196.026†	14396.9	65.60	0.46%	[10] mg/L
Sr 421.552†	4706590.6	82656.13	1.76%	[5] mg/L
T1 190.801†	25937.8	186.98	0.72%	[10] mg/L
Zn 206.200†	41201.3	683.43	1.66%	[10] mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/14/2012 10:52:34 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2487897.3	10294.98	0.41%	100.3	%
ScR 361.383	327324.4	2077.79	0.63%	101.9	%
Mo 202.031†	193120.9	937.49	0.49%	[10]	mg/L
Sb 206.836†	31561.7	164.90	0.52%	[10]	mg/L
Si 288.158†	20958.3	92.28	0.44%	[10]	mg/L
Sn 189.927†	36369.6	176.66	0.49%	[10]	mg/L
Ti 334.903†	200836.0	1874.47	0.93%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/14/2012 10:54:47 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2341241.9	9617.59	0.41%	94.35	%
ScR 361.383	322786.4	2737.60	0.85%	100.5	%
Al 308.215†	53494.9	670.73	1.25%	[30]	mg/L
Ca 317.933†	428543.2	2680.91	0.63%	[30]	mg/L
Fe 273.955†	119319.3	798.41	0.67%	[100]	mg/L
K 766.490†	198270.1	1847.14	0.93%	[100]	mg/L
Mg 279.077†	44750.0	580.80	1.30%	[30]	mg/L
Na 330.237†	2811.3	41.75	1.49%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	178100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1783	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1852	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7891	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4808	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	654200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14280	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	30880	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	35190	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6287	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	254900	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1193	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1983	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1492	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	33910	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	19310	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12930	0.00000	1.000000	

Na 330.237	1	Lin Thru 0	0.0	28.11	0.00000	1.000000
Ni 231.604	1	Lin Thru 0	0.0	4267	0.00000	1.000000
Pb 220.353	1	Lin Thru 0	0.0	7783	0.00000	1.000000
Sb 206.836	1	Lin Thru 0	0.0	3156	0.00000	1.000000
Se 196.026	1	Lin Thru 0	0.0	1440	0.00000	1.000000
Si 288.158	1	Lin Thru 0	0.0	2096	0.00000	1.000000
Sn 189.927	1	Lin Thru 0	0.0	3637	0.00000	1.000000
Sr 421.552	1	Lin Thru 0	0.0	941300	0.00000	1.000000
Ti 334.903	1	Lin Thru 0	0.0	20080	0.00000	1.000000
Tl 190.801	1	Lin Thru 0	0.0	2594	0.00000	1.000000
V 292.402	1	Lin Thru 0	0.0	134100	0.00000	1.000000
Zn 206.200	1	Lin Thru 0	0.0	4120	0.00000	1.000000

Analysis Begun

Start Time: 11/14/2012 10:58:45 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/14/2012 7:50:58 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121114
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 11/14/2012 10:58:46 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2467546.0	99.44	%	0.248				0.25%
ScR 361.383	317215.7	98.79	%	0.505				0.51%
Ag 328.068†	170654.4	0.9582	mg/L	0.00131	0.9582	mg/L	0.00131	0.14%
Al 308.215†	3630.7	2.002	mg/L	0.0169	2.002	mg/L	0.0169	0.85%
As 188.979†	3502.8	1.917	mg/L	0.0143	1.917	mg/L	0.0143	0.74%
B 249.677†	7547.1	0.9556	mg/L	0.00639	0.9556	mg/L	0.00639	0.67%
Ba 233.527†	4937.7	1.026	mg/L	0.0070	1.026	mg/L	0.0070	0.69%
Be 313.042†	610666.8	0.9333	mg/L	0.00446	0.9333	mg/L	0.00446	0.48%
Ca 317.933†	27548.0	1.928	mg/L	0.0103	1.928	mg/L	0.0103	0.53%
Cd 228.802†	31402.7	1.005	mg/L	0.0028	1.005	mg/L	0.0028	0.28%
Co 228.616†	35270.8	1.000	mg/L	0.0065	1.000	mg/L	0.0065	0.65%
Cr 267.716†	6437.8	1.023	mg/L	0.0075	1.023	mg/L	0.0075	0.73%
Cu 324.752†	255142.6	1.001	mg/L	0.0027	1.001	mg/L	0.0027	0.27%
Fe 273.955†	2436.5	2.035	mg/L	0.0119	2.035	mg/L	0.0119	0.58%
K 766.490†	39466.8	19.91	mg/L	0.134	19.91	mg/L	0.134	0.67%
Mg 279.077†	3000.1	2.018	mg/L	0.0103	2.018	mg/L	0.0103	0.51%
Mn 257.610†	33368.6	0.9844	mg/L	0.00171	0.9844	mg/L	0.00171	0.17%
Mo 202.031†	19615.2	1.016	mg/L	0.0057	1.016	mg/L	0.0057	0.57%
Na 589.592†	626586.1	48.45	mg/L	0.271	48.45	mg/L	0.271	0.56%
Na 330.237†	1467.2	52.10	mg/L	0.470	52.10	mg/L	0.470	0.90%
Ni 231.604†	4058.0	0.9512	mg/L	0.00894	0.9512	mg/L	0.00894	0.94%
Pb 220.353†	15158.2	1.949	mg/L	0.0124	1.949	mg/L	0.0124	0.64%
Sb 206.836†	6603.3	2.091	mg/L	0.0150	2.091	mg/L	0.0150	0.72%
Se 196.026†	2706.2	1.879	mg/L	0.0147	1.879	mg/L	0.0147	0.78%
Si 288.158†	4412.4	2.105	mg/L	0.0181	2.105	mg/L	0.0181	0.86%
Sn 189.927†	3635.5	1.001	mg/L	0.0060	1.001	mg/L	0.0060	0.60%
Sr 421.552†	887166.9	0.9425	mg/L	0.00498	0.9425	mg/L	0.00498	0.53%
Ti 334.903†	20711.0	1.030	mg/L	0.0045	1.030	mg/L	0.0045	0.44%
Tl 190.801†	4911.8	1.886	mg/L	0.0119	1.886	mg/L	0.0119	0.63%
V 292.402†	130855.2	0.9801	mg/L	0.00151	0.9801	mg/L	0.00151	0.15%
Zn 206.200†	4039.8	0.9803	mg/L	0.00675	0.9803	mg/L	0.00675	0.69%

Sequence No.: 2
Sample ID: ICB
Autosampler Location: 1
Date Collected: 11/14/2012 11:02:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2459698.4	99.12	%	0.294				0.30%
ScR 361.383	318177.3	99.09	%	1.336				1.35%
Ag 328.068†	-27.2	-0.00015	mg/L	0.000171	-0.00015	mg/L	0.000171	112.14%
Al 308.215†	-21.0	-0.01180	mg/L	0.006514	-0.01180	mg/L	0.006514	55.22%
As 188.979†	-3.3	-0.00178	mg/L	0.001096	-0.00178	mg/L	0.001096	61.73%
B 249.677†	30.9	0.00392	mg/L	0.000549	0.00392	mg/L	0.000549	14.02%
Ba 233.527†	-2.3	-0.00048	mg/L	0.000564	-0.00048	mg/L	0.000564	117.89%
Be 313.042†	87.2	0.00013	mg/L	0.000066	0.00013	mg/L	0.000066	49.19%
Ca 317.933†	-75.9	-0.00531	mg/L	0.001277	-0.00531	mg/L	0.001277	24.03%
Cd 228.802†	-2.9	-0.00008	mg/L	0.000133	-0.00008	mg/L	0.000133	162.21%
Co 228.616†	-3.8	-0.00011	mg/L	0.000184	-0.00011	mg/L	0.000184	166.33%
Cr 267.716†	0.1	0.00002	mg/L	0.001021	0.00002	mg/L	0.001021	>999.9%
Cu 324.752†	-27.9	-0.00011	mg/L	0.000116	-0.00011	mg/L	0.000116	105.40%
Fe 273.955†	-8.7	-0.00731	mg/L	0.000814	-0.00731	mg/L	0.000814	11.13%
K 766.490†	1.6	0.00082	mg/L	0.016730	0.00082	mg/L	0.016730	>999.9%
Mg 279.077†	-6.9	-0.00459	mg/L	0.004699	-0.00459	mg/L	0.004699	102.37%
Mn 257.610†	1.2	0.00003	mg/L	0.000063	0.00003	mg/L	0.000063	184.20%
Mo 202.031†	26.1	0.00135	mg/L	0.000172	0.00135	mg/L	0.000172	12.74%
Na 589.592†	82.6	0.00638	mg/L	0.003153	0.00638	mg/L	0.003153	49.39%
Na 330.237†	9.2	0.3260	mg/L	0.33713	0.3260	mg/L	0.33713	103.43%
Ni 231.604†	-2.0	-0.00047	mg/L	0.001087	-0.00047	mg/L	0.001087	230.49%
Pb 220.353†	-2.1	-0.00027	mg/L	0.000876	-0.00027	mg/L	0.000876	319.70%
Sb 206.836†	1.2	0.00039	mg/L	0.001478	0.00039	mg/L	0.001478	376.56%
Se 196.026†	-0.1	-0.00008	mg/L	0.003433	-0.00008	mg/L	0.003433	>999.9%
Si 288.158†	-4.5	-0.00217	mg/L	0.003364	-0.00217	mg/L	0.003364	154.95%
Sn 189.927†	0.8	0.00023	mg/L	0.000953	0.00023	mg/L	0.000953	415.08%
Sr 421.552†	177.4	0.00019	mg/L	0.000043	0.00019	mg/L	0.000043	22.88%
Ti 334.903†	15.1	0.00075	mg/L	0.000214	0.00075	mg/L	0.000214	28.54%
Tl 190.801†	-2.1	-0.00080	mg/L	0.002147	-0.00080	mg/L	0.002147	267.45%
V 292.402†	-7.2	-0.00005	mg/L	0.000097	-0.00005	mg/L	0.000097	183.59%
Zn 206.200†	0.7	0.00017	mg/L	0.000333	0.00017	mg/L	0.000333	197.71%

~~User canceled analysis.~~

BA 11/14/12

Analysis Begun

Start Time: 11/14/2012 11:07:41 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/14/2012 7:50:58 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121114
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 3
Sample ID: CRI
Autosampler Location: 301
Date Collected: 11/14/2012 11:07:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2437471.4	98.23	%	0.602				0.61%
ScR 361.383	320164.1	99.71	%	0.356				0.36%
Ag 328.068†	486.8	0.00273	mg/L	0.000181	0.00273	mg/L	0.000181	6.63%
Al 308.215†	71.3	0.03984	mg/L	0.007137	0.03984	mg/L	0.007137	17.91%
As 188.979†	86.0	0.04654	mg/L	0.000333	0.04654	mg/L	0.000333	0.72%
B 249.677†	168.2	0.02132	mg/L	0.000530	0.02132	mg/L	0.000530	2.49%
Ba 233.527†	13.1	0.00273	mg/L	0.000168	0.00273	mg/L	0.000168	6.15%
Be 313.042†	557.2	0.00085	mg/L	0.000024	0.00085	mg/L	0.000024	2.88%
Ca 317.933†	609.1	0.04264	mg/L	0.000807	0.04264	mg/L	0.000807	1.89%
Cd 228.802†	69.7	0.00196	mg/L	0.000190	0.00196	mg/L	0.000190	9.69%
Co 228.616†	115.5	0.00327	mg/L	0.000175	0.00327	mg/L	0.000175	5.35%
Cr 267.716†	35.7	0.00567	mg/L	0.001051	0.00567	mg/L	0.001051	18.53%
Cu 324.752†	498.6	0.00195	mg/L	0.000053	0.00195	mg/L	0.000053	2.71%
Fe 273.955†	49.4	0.04135	mg/L	0.000507	0.04135	mg/L	0.000507	1.23%
K 766.490†	960.6	0.4845	mg/L	0.01414	0.4845	mg/L	0.01414	2.92%
Mg 279.077†	71.2	0.04776	mg/L	0.000880	0.04776	mg/L	0.000880	1.84%
Mn 257.610†	33.3	0.00099	mg/L	0.000088	0.00099	mg/L	0.000088	8.95%
Mo 202.031†	100.2	0.00519	mg/L	0.000286	0.00519	mg/L	0.000286	5.52%
Na 589.592†	5952.8	0.4603	mg/L	0.00308	0.4603	mg/L	0.00308	0.67%
Na 330.237†	20.4	0.7251	mg/L	0.10510	0.7251	mg/L	0.10510	14.50%
Ni 231.604†	36.0	0.00844	mg/L	0.001380	0.00844	mg/L	0.001380	16.35%
Pb 220.353†	152.9	0.01966	mg/L	0.000778	0.01966	mg/L	0.000778	3.96%
Sb 206.836†	161.9	0.05132	mg/L	0.001078	0.05132	mg/L	0.001078	2.10%
Se 196.026†	69.2	0.04810	mg/L	0.002053	0.04810	mg/L	0.002053	4.27%
Si 288.158†	132.1	0.06298	mg/L	0.000969	0.06298	mg/L	0.000969	1.54%
Sn 189.927†	36.4	0.01004	mg/L	0.000447	0.01004	mg/L	0.000447	4.45%
Sr 421.552†	888.9	0.00094	mg/L	0.000065	0.00094	mg/L	0.000065	6.86%
Ti 334.903†	107.2	0.00533	mg/L	0.000973	0.00533	mg/L	0.000973	18.27%
Tl 190.801†	119.6	0.04610	mg/L	0.001000	0.04610	mg/L	0.001000	2.17%
V 292.402†	376.2	0.00283	mg/L	0.000091	0.00283	mg/L	0.000091	3.21%
Zn 206.200†	39.3	0.00953	mg/L	0.000489	0.00953	mg/L	0.000489	5.13%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/14/2012 11:11:58 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2435800.0	98.16	%	0.463				0.47%
ScR 361.383	316031.3	98.42	%	0.900				0.91%
Ag 328.068†	-201.9	-0.00113	mg/L	0.000085	-0.00113	mg/L	0.000085	7.55%
Al 308.215†	352707.0	197.8	mg/L	2.08	197.8	mg/L	2.08	1.05%
As 188.979†	38.9	0.01550	mg/L	0.003898	0.01550	mg/L	0.003898	25.15%
B 249.677†	-26.7	-0.00338	mg/L	0.001109	-0.00338	mg/L	0.001109	32.76%
Ba 233.527†	139.1	-0.00305	mg/L	0.001323	-0.00305	mg/L	0.001323	43.34%
Be 313.042†	46.8	0.00007	mg/L	0.000048	0.00007	mg/L	0.000048	68.13%
Ca 317.933†	1407382.0	98.52	mg/L	1.295	98.52	mg/L	1.295	1.31%
Cd 228.802†	56.1	-0.00018	mg/L	0.000245	-0.00018	mg/L	0.000245	135.77%
Co 228.616†	67.5	-0.00064	mg/L	0.000035	-0.00064	mg/L	0.000035	5.47%
Cr 267.716†	11.4	-0.00025	mg/L	0.001316	-0.00025	mg/L	0.001316	517.01%
Cu 324.752†	-1968.8	0.00005	mg/L	0.000180	0.00005	mg/L	0.000180	364.68%
Fe 273.955†	233083.9	195.3	mg/L	2.72	195.3	mg/L	2.72	1.39%
K 766.490†	-29.9	-0.01506	mg/L	0.005107	-0.01506	mg/L	0.005107	33.90%
Mg 279.077†	152717.4	102.3	mg/L	1.50	102.3	mg/L	1.50	1.47%
Mn 257.610†	26.8	0.00076	mg/L	0.000134	0.00076	mg/L	0.000134	17.61%
Mo 202.031†	39.0	0.00096	mg/L	0.000190	0.00096	mg/L	0.000190	19.86%
Na 589.592†	117.1	0.00905	mg/L	0.003702	0.00905	mg/L	0.003702	40.89%
Na 330.237†	-12.1	-0.4288	mg/L	0.05667	-0.4288	mg/L	0.05667	13.22%
Ni 231.604†	1.7	0.00040	mg/L	0.000909	0.00040	mg/L	0.000909	224.98%
Pb 220.353†	-309.7	-0.00049	mg/L	0.000984	-0.00049	mg/L	0.000984	201.40%
Sb 206.836†	16.4	0.00498	mg/L	0.003068	0.00498	mg/L	0.003068	61.64%
Se 196.026†	24.3	0.01685	mg/L	0.004049	0.01685	mg/L	0.004049	24.03%
Si 288.158†	-30.2	-0.00200	mg/L	0.002725	-0.00200	mg/L	0.002725	136.10%
Sn 189.927†	-91.0	-0.01282	mg/L	0.000761	-0.01282	mg/L	0.000761	5.94%
Sr 421.552†	3545.8	0.00377	mg/L	0.000034	0.00377	mg/L	0.000034	0.89%
Ti 334.903†	149.7	0.00275	mg/L	0.000638	0.00275	mg/L	0.000638	23.22%
Tl 190.801†	-54.4	-0.00010	mg/L	0.002331	-0.00010	mg/L	0.002331	>999.9%
V 292.402†	1035.1	0.00090	mg/L	0.000511	0.00090	mg/L	0.000511	57.02%
Zn 206.200†	18.4	0.00447	mg/L	0.000343	0.00447	mg/L	0.000343	7.66%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/14/2012 11:16:14 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2432471.4	98.03	%	0.379				0.39%
ScR 361.383	312879.1	97.44	%	0.608				0.62%
Ag 328.068†	174549.4	0.9801	mg/L	0.00109	0.9801	mg/L	0.00109	0.11%
Al 308.215†	354674.9	198.9	mg/L	1.88	198.9	mg/L	1.88	0.94%
As 188.979†	1830.9	0.9823	mg/L	0.00420	0.9823	mg/L	0.00420	0.43%
B 249.677†	-11.4	-0.00348	mg/L	0.000603	-0.00348	mg/L	0.000603	17.34%
Ba 233.527†	5074.5	1.023	mg/L	0.0119	1.023	mg/L	0.0119	1.16%
Be 313.042†	623246.4	0.9525	mg/L	0.00690	0.9525	mg/L	0.00690	0.72%
Ca 317.933†	1430240.6	100.1	mg/L	1.05	100.1	mg/L	1.05	1.05%
Cd 228.802†	31568.3	1.015	mg/L	0.0054	1.015	mg/L	0.0054	0.54%
Co 228.616†	34762.5	0.9850	mg/L	0.00332	0.9850	mg/L	0.00332	0.34%
Cr 267.716†	6464.0	1.026	mg/L	0.0087	1.026	mg/L	0.0087	0.84%
Cu 324.752†	260958.5	1.032	mg/L	0.0012	1.032	mg/L	0.0012	0.11%
Fe 273.955†	235427.2	197.3	mg/L	1.66	197.3	mg/L	1.66	0.84%
K 766.490†	-95.9	-0.04837	mg/L	0.009403	-0.04837	mg/L	0.009403	19.44%
Mg 279.077†	149179.6	99.91	mg/L	1.155	99.91	mg/L	1.155	1.16%
Mn 257.610†	33274.7	0.9814	mg/L	0.00937	0.9814	mg/L	0.00937	0.95%
Mo 202.031†	38.2	0.00084	mg/L	0.000408	0.00084	mg/L	0.000408	48.49%
Na 589.592†	294.4	0.02276	mg/L	0.001078	0.02276	mg/L	0.001078	4.74%
Na 330.237†	-1.5	-0.3561	mg/L	0.11039	-0.3561	mg/L	0.11039	31.00%
Ni 231.604†	3969.6	0.9304	mg/L	0.00804	0.9304	mg/L	0.00804	0.86%
Pb 220.353†	7181.1	0.9628	mg/L	0.00244	0.9628	mg/L	0.00244	0.25%
Sb 206.836†	3273.1	1.026	mg/L	0.0023	1.026	mg/L	0.0023	0.22%
Se 196.026†	1400.7	0.9719	mg/L	0.00175	0.9719	mg/L	0.00175	0.18%
Si 288.158†	-39.5	-0.00304	mg/L	0.000947	-0.00304	mg/L	0.000947	31.21%
Sn 189.927†	-89.4	-0.01170	mg/L	0.001138	-0.01170	mg/L	0.001138	9.72%
Sr 421.552†	3598.5	0.00382	mg/L	0.000059	0.00382	mg/L	0.000059	1.53%
Ti 334.903†	139.6	0.00197	mg/L	0.000163	0.00197	mg/L	0.000163	8.27%
Tl 190.801†	2330.8	0.9105	mg/L	0.00224	0.9105	mg/L	0.00224	0.25%
V 292.402†	129666.7	0.9644	mg/L	0.00257	0.9644	mg/L	0.00257	0.27%
Zn 206.200†	3825.7	0.9285	mg/L	0.01265	0.9285	mg/L	0.01265	1.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/14/2012 11:21:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2464633.1	99.32	%	0.156				0.16%
ScR 361.383	315439.0	98.24	%	1.193				1.21%
Ag 328.068†	176609.0	0.9917	mg/L	0.00508	0.9917	mg/L	0.00508	0.51%
Al 308.215†	3670.9	2.025	mg/L	0.0284	2.025	mg/L	0.0284	1.40%
As 188.979†	3549.4	1.942	mg/L	0.0030	1.942	mg/L	0.0030	0.15%
B 249.677†	7544.6	0.9553	mg/L	0.00946	0.9553	mg/L	0.00946	0.99%
Ba 233.527†	4952.7	1.030	mg/L	0.0108	1.030	mg/L	0.0108	1.05%
Be 313.042†	618178.7	0.9447	mg/L	0.00833	0.9447	mg/L	0.00833	0.88%
Ca 317.933†	28021.0	1.962	mg/L	0.0159	1.962	mg/L	0.0159	0.81%
Cd 228.802†	31654.4	1.013	mg/L	0.0032	1.013	mg/L	0.0032	0.32%
Co 228.616†	34688.9	0.9836	mg/L	0.00604	0.9836	mg/L	0.00604	0.61%
Cr 267.716†	6463.0	1.027	mg/L	0.0106	1.027	mg/L	0.0106	1.03%
Cu 324.752†	253105.8	0.9926	mg/L	0.00247	0.9926	mg/L	0.00247	0.25%
Fe 273.955†	2479.6	2.071	mg/L	0.0233	2.071	mg/L	0.0233	1.13%
K 766.490†	39755.2	20.05	mg/L	0.110	20.05	mg/L	0.110	0.55%
Mg 279.077†	3034.3	2.041	mg/L	0.0235	2.041	mg/L	0.0235	1.15%
Mn 257.610†	33792.8	0.9969	mg/L	0.00904	0.9969	mg/L	0.00904	0.91%
Mo 202.031†	19219.6	0.9951	mg/L	0.00563	0.9951	mg/L	0.00563	0.57%
Na 589.592†	630745.6	48.78	mg/L	0.374	48.78	mg/L	0.374	0.77%
Na 330.237†	1460.0	51.84	mg/L	0.398	51.84	mg/L	0.398	0.77%
Ni 231.604†	4083.2	0.9572	mg/L	0.01226	0.9572	mg/L	0.01226	1.28%
Pb 220.353†	14903.2	1.916	mg/L	0.0132	1.916	mg/L	0.0132	0.69%
Sb 206.836†	6705.5	2.124	mg/L	0.0037	2.124	mg/L	0.0037	0.17%
Se 196.026†	2741.3	1.903	mg/L	0.0019	1.903	mg/L	0.0019	0.10%
Si 288.158†	4443.8	2.120	mg/L	0.0183	2.120	mg/L	0.0183	0.86%
Sn 189.927†	3687.4	1.015	mg/L	0.0031	1.015	mg/L	0.0031	0.31%
Sr 421.552†	892873.8	0.9485	mg/L	0.00753	0.9485	mg/L	0.00753	0.79%
Ti 334.903†	20876.4	1.038	mg/L	0.0089	1.038	mg/L	0.0089	0.85%
Tl 190.801†	4972.2	1.909	mg/L	0.0058	1.909	mg/L	0.0058	0.30%
V 292.402†	133935.8	1.003	mg/L	0.0060	1.003	mg/L	0.0060	0.60%
Zn 206.200†	4083.2	0.9908	mg/L	0.01034	0.9908	mg/L	0.01034	1.04%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/14/2012 11:26:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2468625.3	99.48	%	0.874				0.88%
ScR 361.383	322031.8	100.3	%	0.58				0.58%
Ag 328.068†	-32.4	-0.00018	mg/L	0.000142	-0.00018	mg/L	0.000142	78.42%
Al 308.215†	-13.0	-0.00731	mg/L	0.004842	-0.00731	mg/L	0.004842	66.20%
As 188.979†	-3.7	-0.00201	mg/L	0.001087	-0.00201	mg/L	0.001087	54.11%
B 249.677†	13.5	0.00171	mg/L	0.000173	0.00171	mg/L	0.000173	10.12%
Ba 233.527†	0.9	0.00019	mg/L	0.000885	0.00019	mg/L	0.000885	456.22%
Be 313.042†	86.7	0.00013	mg/L	0.000058	0.00013	mg/L	0.000058	43.55%
Ca 317.933†	-67.7	-0.00474	mg/L	0.001475	-0.00474	mg/L	0.001475	31.09%
Cd 228.802†	-2.8	-0.00008	mg/L	0.000184	-0.00008	mg/L	0.000184	235.69%
Co 228.616†	-3.1	-0.00009	mg/L	0.000112	-0.00009	mg/L	0.000112	124.34%
Cr 267.716†	5.4	0.00085	mg/L	0.000475	0.00085	mg/L	0.000475	55.56%
Cu 324.752†	-45.6	-0.00018	mg/L	0.000081	-0.00018	mg/L	0.000081	45.10%
Fe 273.955†	-3.9	-0.00331	mg/L	0.006943	-0.00331	mg/L	0.006943	209.98%
K 766.490†	-17.8	-0.00899	mg/L	0.008442	-0.00899	mg/L	0.008442	93.92%
Mg 279.077†	-2.8	-0.00188	mg/L	0.002971	-0.00188	mg/L	0.002971	157.92%
Mn 257.610†	3.4	0.00010	mg/L	0.000174	0.00010	mg/L	0.000174	173.93%
Mo 202.031†	14.9	0.00077	mg/L	0.000155	0.00077	mg/L	0.000155	20.12%
Na 589.592†	78.7	0.00608	mg/L	0.001040	0.00608	mg/L	0.001040	17.09%
Na 330.237†	5.0	0.1769	mg/L	0.19855	0.1769	mg/L	0.19855	112.22%
Ni 231.604†	0.6	0.00015	mg/L	0.000378	0.00015	mg/L	0.000378	247.55%
Pb 220.353†	-3.3	-0.00043	mg/L	0.000823	-0.00043	mg/L	0.000823	192.20%
Sb 206.836†	6.7	0.00213	mg/L	0.000188	0.00213	mg/L	0.000188	8.84%
Se 196.026†	-0.8	-0.00057	mg/L	0.001988	-0.00057	mg/L	0.001988	347.69%
Si 288.158†	3.7	0.00177	mg/L	0.001442	0.00177	mg/L	0.001442	81.50%
Sn 189.927†	3.2	0.00089	mg/L	0.000515	0.00089	mg/L	0.000515	58.03%
Sr 421.552†	109.4	0.00012	mg/L	0.000047	0.00012	mg/L	0.000047	40.55%
Ti 334.903†	6.8	0.00034	mg/L	0.000166	0.00034	mg/L	0.000166	49.00%
Tl 190.801†	-4.3	-0.00167	mg/L	0.002302	-0.00167	mg/L	0.002302	137.83%
V 292.402†	10.0	0.00008	mg/L	0.000024	0.00008	mg/L	0.000024	30.05%
Zn 206.200†	2.1	0.00050	mg/L	0.000288	0.00050	mg/L	0.000288	57.67%

Sequence No.: 8
Sample ID: VR31 MB1 SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 304
Date Collected: 11/14/2012 11:30:26 AM
Data Type: Original

Nebulizer Parameters: VR31 MB1 SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR31 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2501174.6	100.8	%	0.12				0.12%
ScR 361.383	324232.0	101.0	%	0.78				0.78%
Ag 328.068†	-16.9	-0.00009	mg/L	0.000143	-0.00019	mg/L	0.000286	150.61%
Al 308.215†	-5.7	-0.00321	mg/L	0.004614	-0.00642	mg/L	0.009228	143.77%
As 188.979†	-3.6	-0.00194	mg/L	0.001717	-0.00389	mg/L	0.003434	88.35%
B 249.677†	4.5	0.00057	mg/L	0.000325	0.00113	mg/L	0.000649	57.36%
Ba 233.527†	-4.1	-0.00084	mg/L	0.000691	-0.00169	mg/L	0.001381	81.77%
Be 313.042†	-14.0	-0.00002	mg/L	0.000024	-0.00004	mg/L	0.000048	112.80%
Ca 317.933†	-10.8	-0.00076	mg/L	0.001768	-0.00152	mg/L	0.003537	233.00%
Cd 228.802†	-7.2	-0.00022	mg/L	0.000119	-0.00045	mg/L	0.000238	53.45%
Co 228.616†	-8.5	-0.00024	mg/L	0.000153	-0.00048	mg/L	0.000306	63.34%
Cr 267.716†	-3.4	-0.00054	mg/L	0.000813	-0.00108	mg/L	0.001626	151.06%
Cu 324.752†	70.4	0.00028	mg/L	0.000073	0.00055	mg/L	0.000145	26.32%
Fe 273.955†	-7.8	-0.00651	mg/L	0.001955	-0.01302	mg/L	0.003911	30.03%
K 766.490†	3.3	0.00165	mg/L	0.011419	0.00330	mg/L	0.022838	692.92%
Mg 279.077†	-8.9	-0.00594	mg/L	0.001987	-0.01188	mg/L	0.003973	33.44%
Mn 257.610†	-2.5	-0.00007	mg/L	0.000098	-0.00015	mg/L	0.000196	134.81%
Mo 202.031†	-1.5	-0.00008	mg/L	0.000218	-0.00016	mg/L	0.000436	275.86%
Na 589.592†	-44.2	-0.00342	mg/L	0.001828	-0.00684	mg/L	0.003655	53.42%
Na 330.237†	-2.1	-0.07677	mg/L	0.120658	-0.1535	mg/L	0.24132	157.17%
Ni 231.604†	-4.9	-0.00115	mg/L	0.000480	-0.00230	mg/L	0.000959	41.72%
Pb 220.353†	-4.7	-0.00060	mg/L	0.000144	-0.00120	mg/L	0.000288	23.92%
Sb 206.836†	-2.1	-0.00067	mg/L	0.001367	-0.00134	mg/L	0.002735	203.55%
Se 196.026†	-3.7	-0.00257	mg/L	0.004251	-0.00515	mg/L	0.008501	165.20%
Si 288.158†	-1.1	-0.00050	mg/L	0.004660	-0.00101	mg/L	0.009321	923.77%
Sn 189.927†	-3.8	-0.00105	mg/L	0.001067	-0.00209	mg/L	0.002134	101.92%
Sr 421.552†	-12.5	-0.00001	mg/L	0.000017	-0.00003	mg/L	0.000035	130.86%
Ti 334.903†	-9.6	-0.00048	mg/L	0.000655	-0.00096	mg/L	0.001310	137.04%
Tl 190.801†	-4.4	-0.00169	mg/L	0.002707	-0.00338	mg/L	0.005414	160.35%
V 292.402†	-18.0	-0.00014	mg/L	0.000090	-0.00027	mg/L	0.000179	65.95%
Zn 206.200†	19.6	0.00475	mg/L	0.000334	0.00949	mg/L	0.000668	7.04%

Sequence No.: 9
Sample ID: VQ47 E TWC
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 305
Date Collected: 11/14/2012 11:34:42 AM
Data Type: Original

Nebulizer Parameters: VQ47 E TWC

Analyte	Back Pressure	Flow
A11	217.0 kPa	0.75 L/min

Mean Data: VQ47 E TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2491504.6	100.4	%	0.36				0.36%
ScR 361.383	324806.8	101.2	%	0.45				0.44%
Ag 328.068†	-34.4	-0.00019	mg/L	0.000175	-0.00019	mg/L	0.000175	90.82%
Al 308.215†	237.1	0.1329	mg/L	0.00329	0.1329	mg/L	0.00329	2.47%
As 188.979†	2.8	0.00120	mg/L	0.000902	0.00120	mg/L	0.000902	74.93%
B 249.677†	163.4	0.02071	mg/L	0.000098	0.02071	mg/L	0.000098	0.48%
Ba 233.527†	65.3	0.01356	mg/L	0.000445	0.01356	mg/L	0.000445	3.28%
Be 313.042†	25.4	0.00004	mg/L	0.000022	0.00004	mg/L	0.000022	57.19%
Ca 317.933†	96731.5	6.772	mg/L	0.0357	6.772	mg/L	0.0357	0.53%
Cd 228.802†	25.3	0.00081	mg/L	0.000065	0.00081	mg/L	0.000065	8.06%
Co 228.616†	-4.7	-0.00014	mg/L	0.000122	-0.00014	mg/L	0.000122	84.99%
Cr 267.716†	7.7	0.00110	mg/L	0.000673	0.00110	mg/L	0.000673	61.17%
Cu 324.752†	2759.0	0.01082	mg/L	0.000107	0.01082	mg/L	0.000107	0.99%
Fe 273.955†	72.6	0.06084	mg/L	0.002609	0.06084	mg/L	0.002609	4.29%
K 766.490†	1356.1	0.6840	mg/L	0.00625	0.6840	mg/L	0.00625	0.91%
Mg 279.077†	1026.3	0.6880	mg/L	0.00492	0.6880	mg/L	0.00492	0.72%
Mn 257.610†	33.4	0.00096	mg/L	0.000050	0.00096	mg/L	0.000050	5.22%
Mo 202.031†	21.6	0.00104	mg/L	0.000196	0.00104	mg/L	0.000196	18.76%
Na 589.592†	15310.0	1.184	mg/L	0.0079	1.184	mg/L	0.0079	0.67%
Na 330.237†	37.0	1.273	mg/L	0.0775	1.273	mg/L	0.0775	6.09%
Ni 231.604†	-2.3	-0.00053	mg/L	0.000618	-0.00053	mg/L	0.000618	116.03%
Pb 220.353†	-14.5	-0.00185	mg/L	0.000335	-0.00185	mg/L	0.000335	18.14%
Sb 206.836†	-4.4	-0.00146	mg/L	0.002166	-0.00146	mg/L	0.002166	148.43%
Se 196.026†	-3.1	-0.00217	mg/L	0.002610	-0.00217	mg/L	0.002610	120.38%
Si 288.158†	7156.3	3.415	mg/L	0.0475	3.415	mg/L	0.0475	1.39%
Sn 189.927†	-16.0	-0.00356	mg/L	0.000524	-0.00356	mg/L	0.000524	14.71%
Sr 421.552†	24702.9	0.02624	mg/L	0.000160	0.02624	mg/L	0.000160	0.61%
Ti 334.903†	76.9	0.00351	mg/L	0.000362	0.00351	mg/L	0.000362	10.32%
Tl 190.801†	2.3	0.00090	mg/L	0.001699	0.00090	mg/L	0.001699	189.07%
V 292.402†	5.3	0.00004	mg/L	0.000230	0.00004	mg/L	0.000230	561.42%
Zn 206.200†	550.2	0.1335	mg/L	0.00105	0.1335	mg/L	0.00105	0.79%

Sequence No.: 10
Sample ID: VR31 A-L SWC
Analyst: BA
Dilution: 10.000000X

Del

Autosampler Location: 306
Date Collected: 11/14/2012 11:38:41 AM
Data Type: Original

Nebulizer Parameters: VR31 A-L SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2527205.9	101.8	%	0.23				0.23%
ScR 361.383	324633.5	101.1	%	0.47				0.47%
Ag 328.068†	-72.8	-0.00039	mg/L	0.000129	-0.00387	mg/L	0.001294	33.47%
Al 308.215†	93348.7	52.35	mg/L	0.241	523.5	mg/L	2.41	0.46%
As 188.979†	-30.8	0.02362	mg/L	0.002635	0.2362	mg/L	0.02635	11.16%
B 249.677†	18.4	0.00229	mg/L	0.000094	0.02293	mg/L	0.000939	4.09%
Ba 233.527†	4109.8	0.8468	mg/L	0.00502	8.468	mg/L	0.0502	0.59%
Be 313.042†	1219.6	0.00183	mg/L	0.000144	0.01832	mg/L	0.001438	7.85%
Ca 317.933†	137526.7	9.627	mg/L	0.0377	96.27	mg/L	0.377	0.39%
Cd 228.802†	67.8	0.00189	mg/L	0.000193	0.01887	mg/L	0.001927	10.21%
Co 228.616†	781.7	0.01875	mg/L	0.000075	0.1875	mg/L	0.00075	0.40%
Cr 267.716†	343.7	0.05529	mg/L	0.001568	0.5529	mg/L	0.01568	2.84%
Cu 324.752†	10618.4	0.04340	mg/L	0.000123	0.4340	mg/L	0.00123	0.28%
Fe 273.955†	57442.5	48.14	mg/L	0.193	481.4	mg/L	1.93	0.40%
K 766.490†	5799.7	2.925	mg/L	0.0414	29.25	mg/L	0.414	1.42%
Mg 279.077†	17008.8	11.38	mg/L	0.048	113.8	mg/L	0.48	0.42%
Mn 257.610†	63142.8	1.862	mg/L	0.0035	18.62	mg/L	0.035	0.19%
Mo 202.031†	17.7	0.00081	mg/L	0.000592	0.00808	mg/L	0.005921	73.24%
Na 589.592†	4348.1	0.3362	mg/L	0.01166	3.362	mg/L	0.1166	3.47%
Na 330.237†	-3.5	0.1171	mg/L	0.17653	1.171	mg/L	1.7653	150.80%
Ni 231.604†	200.2	0.04692	mg/L	0.000316	0.4692	mg/L	0.00316	0.67%
Pb 220.353†	732.0	0.1046	mg/L	0.00061	1.046	mg/L	0.0061	0.58%
Sb 206.836†	3.9	0.00132	mg/L	0.001781	0.01317	mg/L	0.017805	135.17%
Se 196.026†	7.5	0.00518	mg/L	0.002019	0.05184	mg/L	0.020190	38.95%
Si 288.158†	1727.3	0.8256	mg/L	0.01085	8.256	mg/L	0.1085	1.31%
Sn 189.927†	-20.0	-0.00409	mg/L	0.000609	-0.04092	mg/L	0.006094	14.89%
Sr 421.552†	101239.5	0.1076	mg/L	0.00061	1.076	mg/L	0.0061	0.56%
Ti 334.903†	28691.5	1.428	mg/L	0.0071	14.28	mg/L	0.071	0.50%
Tl 190.801†	-14.9	-0.00102	mg/L	0.000318	-0.01018	mg/L	0.003178	31.23%
V 292.402†	10288.5	0.07474	mg/L	0.000150	0.7474	mg/L	0.00150	0.20%
Zn 206.200†	1045.0	0.2536	mg/L	0.00145	2.536	mg/L	0.0145	0.57%

Sequence No.: 11
Sample ID: VR31 A SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 307
Date Collected: 11/14/2012 11:42:41 AM
Data Type: Original

Nebulizer Parameters: VR31 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2518131.5	101.5	%	0.16				0.16%
ScR 361.383	325241.0	101.3	%	0.37				0.37%
Ag 328.068†	-385.0	-0.00206	mg/L	0.000033	-0.00411	mg/L	0.000066	1.60%
Al 308.215†	462713.7	259.5	mg/L	2.11	518.9	mg/L	4.21	0.81%
As 188.979†	-129.2	0.1268	mg/L	0.00270	0.2536	mg/L	0.00541	2.13%
B 249.677†	132.6	0.01659	mg/L	0.001023	0.03318	mg/L	0.002047	6.17%
Ba 233.527†	19879.7	4.096	mg/L	0.0124	8.191	mg/L	0.0247	0.30%
Be 313.042†	5353.9	0.00803	mg/L	0.000061	0.01605	mg/L	0.000121	0.76%
Ca 317.933†	675989.2	47.32	mg/L	0.422	94.64	mg/L	0.845	0.89%
Cd 228.802†	359.3	0.01004	mg/L	0.000203	0.02009	mg/L	0.000406	2.02%
Co 228.616†	3706.4	0.08842	mg/L	0.000367	0.1768	mg/L	0.00073	0.41%
Cr 267.716†	1651.0	0.2656	mg/L	0.00102	0.5312	mg/L	0.00204	0.38%
Cu 324.752†	52969.7	0.2163	mg/L	0.00016	0.4326	mg/L	0.00031	0.07%
Fe 273.955†	280623.2	235.2	mg/L	2.80	470.4	mg/L	5.59	1.19%
K 766.490†	28854.2	14.55	mg/L	0.132	29.11	mg/L	0.265	0.91%
Mg 279.077†	83774.2	56.04	mg/L	0.490	112.1	mg/L	0.98	0.87%
Mn 257.610†	309207.4	9.118	mg/L	0.0954	18.24	mg/L	0.191	1.05%
Mo 202.031†	77.7	0.00350	mg/L	0.000198	0.00700	mg/L	0.000396	5.65%
Na 589.592†	21203.1	1.640	mg/L	0.0138	3.279	mg/L	0.0275	0.84%
Na 330.237†	4.4	1.339	mg/L	0.3318	2.677	mg/L	0.6636	24.79%
Ni 231.604†	957.6	0.2244	mg/L	0.00106	0.4488	mg/L	0.00212	0.47%
Pb 220.353†	3476.7	0.4993	mg/L	0.00341	0.9987	mg/L	0.00682	0.68%
Sb 206.836†	23.9	0.00809	mg/L	0.003819	0.01618	mg/L	0.007637	47.21%
Se 196.026†	35.0	0.02402	mg/L	0.008733	0.04803	mg/L	0.017466	36.36%
Si 288.158†	8477.2	4.052	mg/L	0.0313	8.103	mg/L	0.0626	0.77%
Sn 189.927†	-66.4	-0.01139	mg/L	0.000963	-0.02278	mg/L	0.001926	8.45%
Sr 421.552†	491984.1	0.5227	mg/L	0.00450	1.045	mg/L	0.0090	0.86%
Ti 334.903†	140072.8	6.972	mg/L	0.0636	13.94	mg/L	0.127	0.91%
Tl 190.801†	-62.5	-0.00086	mg/L	0.000303	-0.00173	mg/L	0.000607	35.15%
V 292.402†	49018.9	0.3558	mg/L	0.00054	0.7117	mg/L	0.00107	0.15%
Zn 206.200†	5044.7	1.224	mg/L	0.0041	2.449	mg/L	0.0082	0.33%

Sequence No.: 12
Sample ID: VR31 ADUP SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 308
Date Collected: 11/14/2012 11:46:27 AM
Data Type: Original

Nebulizer Parameters: VR31 ADUP SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2496068.5	100.6	%	0.46				0.46%
ScR 361.383	326414.3	101.7	%	0.63				0.62%
Ag 328.068†	-403.0	-0.00215	mg/L	0.000157	-0.00429	mg/L	0.000315	7.33%
Al 308.215†	479902.6	269.1	mg/L	1.04	538.2	mg/L	2.09	0.39%
As 188.979†	-119.6	0.1262	mg/L	0.00306	0.2525	mg/L	0.00612	2.42%
B 249.677†	120.1	0.01498	mg/L	0.000709	0.02996	mg/L	0.001418	4.73%
Ba 233.527†	20314.3	4.184	mg/L	0.0098	8.367	mg/L	0.0196	0.23%
Be 313.042†	5683.4	0.00853	mg/L	0.000031	0.01705	mg/L	0.000063	0.37%
Ca 317.933†	664465.5	46.52	mg/L	0.083	93.03	mg/L	0.166	0.18%
Cd 228.802†	375.6	0.01040	mg/L	0.000093	0.02080	mg/L	0.000187	0.90%
Co 228.616†	4121.2	0.1004	mg/L	0.00028	0.2008	mg/L	0.00055	0.27%
Cr 267.716†	1733.1	0.2784	mg/L	0.00165	0.5569	mg/L	0.00331	0.59%
Cu 324.752†	56002.8	0.2288	mg/L	0.00039	0.4577	mg/L	0.00077	0.17%
Fe 273.955†	298684.2	250.3	mg/L	0.72	500.6	mg/L	1.45	0.29%
K 766.490†	26771.3	13.50	mg/L	0.080	27.00	mg/L	0.161	0.60%
Mg 279.077†	96162.4	64.33	mg/L	0.085	128.7	mg/L	0.17	0.13%
Mn 257.610†	342061.7	10.09	mg/L	0.025	20.17	mg/L	0.051	0.25%
Mo 202.031†	75.6	0.00340	mg/L	0.000382	0.00679	mg/L	0.000765	11.25%
Na 589.592†	19812.9	1.532	mg/L	0.0097	3.064	mg/L	0.0193	0.63%
Na 330.237†	2.0	1.183	mg/L	0.0470	2.366	mg/L	0.0940	3.97%
Ni 231.604†	1002.5	0.2349	mg/L	0.00237	0.4699	mg/L	0.00475	1.01%
Pb 220.353†	3330.8	0.4823	mg/L	0.00362	0.9646	mg/L	0.00724	0.75%
Sb 206.836†	24.0	0.00800	mg/L	0.002250	0.01599	mg/L	0.004501	28.14%
Se 196.026†	38.8	0.02669	mg/L	0.007315	0.05339	mg/L	0.014630	27.40%
Si 288.158†	8920.6	4.264	mg/L	0.0075	8.528	mg/L	0.0150	0.18%
Sn 189.927†	-64.5	-0.01098	mg/L	0.000415	-0.02196	mg/L	0.000830	3.78%
Sr 421.552†	478317.9	0.5081	mg/L	0.00260	1.016	mg/L	0.0052	0.51%
Ti 334.903†	136003.4	6.770	mg/L	0.0199	13.54	mg/L	0.040	0.29%
Tl 190.801†	-71.8	-0.00302	mg/L	0.001965	-0.00604	mg/L	0.003930	65.08%
V 292.402†	53296.9	0.3875	mg/L	0.00046	0.7750	mg/L	0.00091	0.12%
Zn 206.200†	5345.4	1.297	mg/L	0.0030	2.595	mg/L	0.0059	0.23%

Sequence No.: 13
Sample ID: VR31 ASPK SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 309
Date Collected: 11/14/2012 11:50:28 AM
Data Type: Original

Nebulizer Parameters: VR31 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2501855.4	100.8	%	0.52				0.51%
ScR 361.383	325595.7	101.4	%	1.22				1.21%
Ag 328.068†	82520.2	0.4635	mg/L	0.00045	0.9269	mg/L	0.00090	0.10%
Al 308.215†	475477.8	266.6	mg/L	3.50	533.2	mg/L	7.00	1.31%
As 188.979†	3259.0	1.945	mg/L	0.0078	3.890	mg/L	0.0155	0.40%
B 249.677†	146.6	0.01737	mg/L	0.000777	0.03473	mg/L	0.001554	4.47%
Ba 233.527†	29314.4	6.057	mg/L	0.0906	12.11	mg/L	0.181	1.50%
Be 313.042†	311075.8	0.4753	mg/L	0.00813	0.9505	mg/L	0.01627	1.71%
Ca 317.933†	807099.5	56.50	mg/L	0.945	113.0	mg/L	1.89	1.67%
Cd 228.802†	16479.8	0.5203	mg/L	0.00256	1.041	mg/L	0.0051	0.49%
Co 228.616†	20708.8	0.5720	mg/L	0.00219	1.144	mg/L	0.0044	0.38%
Cr 267.716†	4733.2	0.7545	mg/L	0.00781	1.509	mg/L	0.0156	1.04%
Cu 324.752†	184398.1	0.7320	mg/L	0.00102	1.464	mg/L	0.0020	0.14%
Fe 273.955†	282862.5	237.1	mg/L	3.37	474.1	mg/L	6.73	1.42%
K 766.490†	44724.0	22.56	mg/L	0.260	45.11	mg/L	0.520	1.15%
Mg 279.077†	101122.3	67.67	mg/L	1.054	135.3	mg/L	2.11	1.56%
Mn 257.610†	376058.2	11.09	mg/L	0.152	22.18	mg/L	0.304	1.37%
Mo 202.031†	90.1	0.00402	mg/L	0.000256	0.00803	mg/L	0.000512	6.37%
Na 589.592†	140150.7	10.84	mg/L	0.150	21.68	mg/L	0.300	1.38%
Na 330.237†	282.0	10.98	mg/L	0.375	21.97	mg/L	0.751	3.42%
Ni 231.604†	2882.5	0.6750	mg/L	0.01150	1.350	mg/L	0.0230	1.70%
Pb 220.353†	17631.7	2.320	mg/L	0.0074	4.640	mg/L	0.0148	0.32%
Sb 206.836†	1481.7	0.4645	mg/L	0.00367	0.9291	mg/L	0.00734	0.79%
Se 196.026†	2638.3	1.832	mg/L	0.0087	3.664	mg/L	0.0175	0.48%
Si 288.158†	7251.1	3.470	mg/L	0.0726	6.940	mg/L	0.1452	2.09%
Sn 189.927†	-73.9	-0.01211	mg/L	0.000234	-0.02422	mg/L	0.000468	1.93%
Sr 421.552†	912855.4	0.9698	mg/L	0.01216	1.940	mg/L	0.0243	1.25%
Ti 334.903†	132844.9	6.612	mg/L	0.0895	13.22	mg/L	0.179	1.35%
Tl 190.801†	4430.9	1.727	mg/L	0.0079	3.455	mg/L	0.0159	0.46%
V 292.402†	108835.8	0.8043	mg/L	0.00076	1.609	mg/L	0.0015	0.10%
Zn 206.200†	6896.9	1.674	mg/L	0.0200	3.348	mg/L	0.0400	1.20%

Sequence No.: 14
Sample ID: VR31 APOST SWC
Analyst: BA
Dilution: 2.000000X

Dal

Autosampler Location: 310
Date Collected: 11/14/2012 11:53:30 AM
Data Type: Original

Nebulizer Parameters: VR31 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2512753.6	101.3	%	0.79				0.78%
ScR 361.383	322444.1	100.4	%	0.80				0.80%
Ag 328.068†	86650.8	0.4866	mg/L	0.00102	0.9733	mg/L	0.00205	0.21%
Al 308.215†	468323.8	262.6	mg/L	2.40	525.2	mg/L	4.79	0.91%
As 188.979†	3502.4	2.089	mg/L	0.0025	4.178	mg/L	0.0049	0.12%
B 249.677†	140.7	0.01658	mg/L	0.002990	0.03316	mg/L	0.005979	18.03%
Ba 233.527†	30236.7	6.249	mg/L	0.0672	12.50	mg/L	0.134	1.08%
Be 313.042†	321011.8	0.4904	mg/L	0.00532	0.9809	mg/L	0.01064	1.08%
Ca 317.933†	833457.0	58.35	mg/L	0.678	116.7	mg/L	1.36	1.16%
Cd 228.802†	17254.1	0.5445	mg/L	0.00269	1.089	mg/L	0.0054	0.49%
Co 228.616†	21441.8	0.5919	mg/L	0.00338	1.184	mg/L	0.0068	0.57%
Cr 267.716†	4904.9	0.7820	mg/L	0.00703	1.564	mg/L	0.0141	0.90%
Cu 324.752†	188426.5	0.7479	mg/L	0.00214	1.496	mg/L	0.0043	0.29%
Fe 273.955†	285608.4	239.4	mg/L	3.02	478.7	mg/L	6.05	1.26%
K 766.490†	49456.9	24.94	mg/L	0.230	49.89	mg/L	0.459	0.92%
Mg 279.077†	100572.5	67.30	mg/L	0.658	134.6	mg/L	1.32	0.98%
Mn 257.610†	328703.2	9.694	mg/L	0.1094	19.39	mg/L	0.219	1.13%
Mo 202.031†	91.0	0.00404	mg/L	0.000482	0.00807	mg/L	0.000965	11.95%
Na 589.592†	146772.2	11.35	mg/L	0.088	22.70	mg/L	0.175	0.77%
Na 330.237†	289.1	11.32	mg/L	0.515	22.65	mg/L	1.030	4.55%
Ni 231.604†	2997.0	0.7015	mg/L	0.00590	1.403	mg/L	0.0118	0.84%
Pb 220.353†	18558.6	2.438	mg/L	0.0111	4.876	mg/L	0.0222	0.46%
Sb 206.836†	52.4	0.01166	mg/L	0.003402	0.02331	mg/L	0.006804	29.19%
Se 196.026†	2871.0	1.993	mg/L	0.0101	3.987	mg/L	0.0203	0.51%
Si 288.158†	8783.2	4.201	mg/L	0.0276	8.402	mg/L	0.0552	0.66%
Sn 189.927†	-63.5	-0.00914	mg/L	0.001630	-0.01829	mg/L	0.003259	17.82%
Sr 421.552†	950309.2	1.010	mg/L	0.0084	2.019	mg/L	0.0169	0.84%
Ti 334.903†	141756.8	7.055	mg/L	0.0648	14.11	mg/L	0.130	0.92%
Tl 190.801†	4681.2	1.824	mg/L	0.0111	3.648	mg/L	0.0222	0.61%
V 292.402†	114503.2	0.8462	mg/L	0.00121	1.692	mg/L	0.0024	0.14%
Zn 206.200†	7101.5	1.724	mg/L	0.0183	3.447	mg/L	0.0366	1.06%

Sequence No.: 15
Sample ID: VR31 B SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 311
Date Collected: 11/14/2012 11:56:34 AM
Data Type: Original

Nebulizer Parameters: VR31 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2496674.2	100.6	%	0.19				0.19%
ScR 361.383	320623.1	99.85	%	0.246				0.25%
Ag 328.068†	-103.0	-0.00049	mg/L	0.000091	-0.00098	mg/L	0.000182	18.54%
Al 308.215†	395402.7	221.7	mg/L	0.70	443.4	mg/L	1.39	0.31%
As 188.979†	10.1	0.1761	mg/L	0.00098	0.3523	mg/L	0.00195	0.55%
B 249.677†	215.4	0.02712	mg/L	0.000954	0.05424	mg/L	0.001909	3.52%
Ba 233.527†	36849.1	7.628	mg/L	0.0262	15.26	mg/L	0.052	0.34%
Be 313.042†	4366.1	0.00654	mg/L	0.000016	0.01308	mg/L	0.000031	0.24%
Ca 317.933†	838531.3	58.70	mg/L	0.091	117.4	mg/L	0.18	0.16%
Cd 228.802†	1736.9	0.05429	mg/L	0.000177	0.1086	mg/L	0.00035	0.33%
Co 228.616†	3087.6	0.07256	mg/L	0.000263	0.1451	mg/L	0.00053	0.36%
Cr 267.716†	1725.7	0.2759	mg/L	0.00115	0.5517	mg/L	0.00230	0.42%
Cu 324.752†	52320.9	0.2130	mg/L	0.00025	0.4261	mg/L	0.00049	0.12%
Fe 273.955†	254190.6	213.0	mg/L	0.18	426.1	mg/L	0.35	0.08%
K 766.490†	41680.4	21.02	mg/L	0.144	42.04	mg/L	0.288	0.69%
Mg 279.077†	68449.4	45.77	mg/L	0.094	91.55	mg/L	0.189	0.21%
Mn 257.610†	873583.2	25.76	mg/L	0.034	51.52	mg/L	0.068	0.13%
Mo 202.031†	102.9	0.00468	mg/L	0.000220	0.00936	mg/L	0.000441	4.71%
Na 589.592†	25752.9	1.991	mg/L	0.0089	3.983	mg/L	0.0178	0.45%
Na 330.237†	49.0	1.751	mg/L	0.0613	3.502	mg/L	0.1226	3.50%
Ni 231.604†	601.8	0.1410	mg/L	0.00067	0.2821	mg/L	0.00133	0.47%
Pb 220.353†	17757.8	2.326	mg/L	0.0077	4.653	mg/L	0.0154	0.33%
Sb 206.836†	46.4	0.01443	mg/L	0.002460	0.02886	mg/L	0.004921	17.05%
Se 196.026†	48.4	0.03338	mg/L	0.005288	0.06676	mg/L	0.010576	15.84%
Si 288.158†	10489.9	5.011	mg/L	0.0237	10.02	mg/L	0.047	0.47%
Sn 189.927†	-61.0	-0.00855	mg/L	0.001552	-0.01709	mg/L	0.003105	18.16%
Sr 421.552†	1688296.4	1.794	mg/L	0.0065	3.587	mg/L	0.0129	0.36%
Ti 334.903†	122406.7	6.092	mg/L	0.0119	12.18	mg/L	0.024	0.20%
Tl 190.801†	-59.8	-0.00189	mg/L	0.000836	-0.00378	mg/L	0.001672	44.17%
V 292.402†	40144.7	0.2935	mg/L	0.00086	0.5870	mg/L	0.00173	0.29%
Zn 206.200†	17231.9	4.182	mg/L	0.0188	8.365	mg/L	0.0375	0.45%

Sequence No.: 16
Sample ID: VR31 C SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 312
Date Collected: 11/14/2012 12:00:22 PM
Data Type: Original

Nebulizer Parameters: VR31 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2545050.5	102.6	%	0.38				0.37%
ScR 361.383	327995.2	102.2	%	0.92				0.90%
Ag 328.068†	-429.2	-0.00230	mg/L	0.000077	-0.00460	mg/L	0.000154	3.35%
Al 308.215†	345529.6	193.8	mg/L	0.79	387.5	mg/L	1.59	0.41%
As 188.979†	-172.5	0.1321	mg/L	0.00184	0.2643	mg/L	0.00368	1.39%
B 249.677†	105.5	0.01316	mg/L	0.000586	0.02633	mg/L	0.001171	4.45%
Ba 233.527†	17241.8	3.550	mg/L	0.0275	7.101	mg/L	0.0550	0.77%
Be 313.042†	3766.1	0.00559	mg/L	0.000023	0.01117	mg/L	0.000045	0.40%
Ca 317.933†	612608.9	42.89	mg/L	0.221	85.77	mg/L	0.443	0.52%
Cd 228.802†	699.7	0.02136	mg/L	0.000225	0.04272	mg/L	0.000449	1.05%
Co 228.616†	3690.2	0.08634	mg/L	0.000471	0.1727	mg/L	0.00094	0.55%
Cr 267.716†	1906.2	0.3056	mg/L	0.00300	0.6112	mg/L	0.00601	0.98%
Cu 324.752†	40559.7	0.1666	mg/L	0.00041	0.3332	mg/L	0.00083	0.25%
Fe 273.955†	257301.6	215.6	mg/L	1.14	431.3	mg/L	2.29	0.53%
K 766.490†	33397.5	16.84	mg/L	0.082	33.69	mg/L	0.164	0.49%
Mg 279.077†	77253.7	51.68	mg/L	0.204	103.4	mg/L	0.41	0.40%
Mn 257.610†	380986.0	11.24	mg/L	0.054	22.47	mg/L	0.107	0.48%
Mo 202.031†	131.7	0.00634	mg/L	0.000221	0.01268	mg/L	0.000442	3.49%
Na 589.592†	29148.5	2.254	mg/L	0.0154	4.508	mg/L	0.0309	0.68%
Na 330.237†	26.5	1.976	mg/L	0.0933	3.953	mg/L	0.1865	4.72%
Ni 231.604†	758.3	0.1777	mg/L	0.00188	0.3554	mg/L	0.00377	1.06%
Pb 220.353†	5720.1	0.7728	mg/L	0.00285	1.546	mg/L	0.0057	0.37%
Sb 206.836†	25.8	0.00862	mg/L	0.003814	0.01724	mg/L	0.007627	44.23%
Se 196.026†	29.8	0.02046	mg/L	0.005989	0.04092	mg/L	0.011978	29.27%
Si 288.158†	8941.0	4.272	mg/L	0.0264	8.545	mg/L	0.0528	0.62%
Sn 189.927†	-51.5	-0.00770	mg/L	0.000935	-0.01539	mg/L	0.001870	12.15%
Sr 421.552†	484683.6	0.5149	mg/L	0.00217	1.030	mg/L	0.0043	0.42%
Ti 334.903†	160079.4	7.969	mg/L	0.0247	15.94	mg/L	0.049	0.31%
Tl 190.801†	-50.7	0.00155	mg/L	0.000406	0.00309	mg/L	0.000812	26.26%
V 292.402†	50206.6	0.3653	mg/L	0.00107	0.7306	mg/L	0.00214	0.29%
Zn 206.200†	9770.7	2.371	mg/L	0.0194	4.743	mg/L	0.0388	0.82%

Sequence No.: 17
Sample ID: VR31 MB1SPK SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 313
Date Collected: 11/14/2012 12:04:08 PM
Data Type: Original

Nebulizer Parameters: VR31 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2498498.8	100.7	%	0.26				0.26%
ScR 361.383	327052.2	101.9	%	0.66				0.65%
Ag 328.068†	92185.1	0.5176	mg/L	0.00117	1.035	mg/L	0.0023	0.23%
Al 308.215†	3650.4	2.040	mg/L	0.0055	4.079	mg/L	0.0111	0.27%
As 188.979†	3638.5	1.964	mg/L	0.0112	3.928	mg/L	0.0225	0.57%
B 249.677†	8.9	0.00008	mg/L	0.000482	0.00016	mg/L	0.000965	621.40%
Ba 233.527†	9865.6	2.051	mg/L	0.0092	4.103	mg/L	0.0184	0.45%
Be 313.042†	315593.3	0.4823	mg/L	0.00326	0.9646	mg/L	0.00653	0.68%
Ca 317.933†	142050.7	9.944	mg/L	0.0578	19.89	mg/L	0.116	0.58%
Cd 228.802†	16701.2	0.5281	mg/L	0.00128	1.056	mg/L	0.0026	0.24%
Co 228.616†	18014.1	0.5116	mg/L	0.00113	1.023	mg/L	0.0023	0.22%
Cr 267.716†	3221.5	0.5113	mg/L	0.00160	1.023	mg/L	0.0032	0.31%
Cu 324.752†	128446.3	0.5040	mg/L	0.00055	1.008	mg/L	0.0011	0.11%
Fe 273.955†	2490.9	2.084	mg/L	0.0049	4.168	mg/L	0.0098	0.24%
K 766.490†	19374.1	9.772	mg/L	0.0259	19.54	mg/L	0.052	0.26%
Mg 279.077†	15283.6	10.25	mg/L	0.042	20.49	mg/L	0.085	0.41%
Mn 257.610†	17287.5	0.5101	mg/L	0.00154	1.020	mg/L	0.0031	0.30%
Mo 202.031†	20.1	0.00090	mg/L	0.000220	0.00181	mg/L	0.000439	24.31%
Na 589.592†	121552.2	9.400	mg/L	0.0374	18.80	mg/L	0.075	0.40%
Na 330.237†	285.3	9.990	mg/L	0.0272	19.98	mg/L	0.054	0.27%
Ni 231.604†	2023.6	0.4745	mg/L	0.00246	0.9490	mg/L	0.00492	0.52%
Pb 220.353†	15294.5	1.966	mg/L	0.0029	3.932	mg/L	0.0058	0.15%
Sb 206.836†	6698.3	2.117	mg/L	0.0083	4.234	mg/L	0.0166	0.39%
Se 196.026†	2803.4	1.947	mg/L	0.0156	3.893	mg/L	0.0311	0.80%
Si 288.158†	4.5	0.00538	mg/L	0.003095	0.01076	mg/L	0.006190	57.53%
Sn 189.927†	-29.6	-0.00589	mg/L	0.000351	-0.01178	mg/L	0.000702	5.96%
Sr 421.552†	443152.0	0.4708	mg/L	0.00223	0.9416	mg/L	0.00445	0.47%
Ti 334.903†	121.0	0.00545	mg/L	0.000547	0.01090	mg/L	0.001094	10.04%
Tl 190.801†	4997.7	1.922	mg/L	0.0083	3.844	mg/L	0.0165	0.43%
V 292.402†	68618.0	0.5138	mg/L	0.00111	1.028	mg/L	0.0022	0.22%
Zn 206.200†	1986.6	0.4822	mg/L	0.00094	0.9645	mg/L	0.00188	0.20%

Sequence No.: 18
Sample ID: CV 2
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/14/2012 12:08:08 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2494842.4	100.5	%	0.49				0.49%
ScR 361.383	319392.0	99.47	%	0.699				0.70%
Ag 328.068†	171789.6	0.9646	mg/L	0.00176	0.9646	mg/L	0.00176	0.18%
Al 308.215†	3662.3	2.019	mg/L	0.0110	2.019	mg/L	0.0110	0.54%
As 188.979†	3561.9	1.949	mg/L	0.0138	1.949	mg/L	0.0138	0.71%
B 249.677†	7524.7	0.9527	mg/L	0.00579	0.9527	mg/L	0.00579	0.61%
Ba 233.527†	4968.0	1.033	mg/L	0.0057	1.033	mg/L	0.0057	0.55%
Be 313.042†	618640.7	0.9454	mg/L	0.00621	0.9454	mg/L	0.00621	0.66%
Ca 317.933†	28034.4	1.963	mg/L	0.0172	1.963	mg/L	0.0172	0.88%
Cd 228.802†	31788.8	1.017	mg/L	0.0028	1.017	mg/L	0.0028	0.27%
Co 228.616†	35889.1	1.018	mg/L	0.0056	1.018	mg/L	0.0056	0.55%
Cr 267.716†	6481.2	1.030	mg/L	0.0040	1.030	mg/L	0.0040	0.39%
Cu 324.752†	255855.6	1.003	mg/L	0.0026	1.003	mg/L	0.0026	0.26%
Fe 273.955†	2474.6	2.067	mg/L	0.0220	2.067	mg/L	0.0220	1.06%
K 766.490†	39718.6	20.03	mg/L	0.186	20.03	mg/L	0.186	0.93%
Mg 279.077†	3031.5	2.040	mg/L	0.0144	2.040	mg/L	0.0144	0.71%
Mn 257.610†	33814.5	0.9976	mg/L	0.00600	0.9976	mg/L	0.00600	0.60%
Mo 202.031†	19844.9	1.028	mg/L	0.0047	1.028	mg/L	0.0047	0.46%
Na 589.592†	630501.2	48.76	mg/L	0.310	48.76	mg/L	0.310	0.64%
Na 330.237†	1465.7	52.05	mg/L	0.152	52.05	mg/L	0.152	0.29%
Ni 231.604†	4090.1	0.9588	mg/L	0.00406	0.9588	mg/L	0.00406	0.42%
Pb 220.353†	15453.0	1.987	mg/L	0.0106	1.987	mg/L	0.0106	0.54%
Sb 206.836†	6703.1	2.123	mg/L	0.0116	2.123	mg/L	0.0116	0.55%
Se 196.026†	2752.8	1.911	mg/L	0.0087	1.911	mg/L	0.0087	0.45%
Si 288.158†	4444.1	2.120	mg/L	0.0187	2.120	mg/L	0.0187	0.88%
Sn 189.927†	3709.8	1.021	mg/L	0.0055	1.021	mg/L	0.0055	0.54%
Sr 421.552†	891952.4	0.9476	mg/L	0.00572	0.9476	mg/L	0.00572	0.60%
Ti 334.903†	20894.1	1.039	mg/L	0.0066	1.039	mg/L	0.0066	0.64%
Tl 190.801†	4990.7	1.916	mg/L	0.0117	1.916	mg/L	0.0117	0.61%
V 292.402†	132129.2	0.9896	mg/L	0.00278	0.9896	mg/L	0.00278	0.28%
Zn 206.200†	4092.7	0.9931	mg/L	0.00693	0.9931	mg/L	0.00693	0.70%

Sequence No.: 19
Sample ID: CB 2
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/14/2012 12:13:00 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2499126.5	100.7	%	0.75				0.75%
ScR 361.383	323357.9	100.7	%	0.23				0.23%
Ag 328.068†	-9.2	-0.00005	mg/L	0.000114	-0.00005	mg/L	0.000114	221.45%
Al 308.215†	1.6	0.00089	mg/L	0.007108	0.00089	mg/L	0.007108	800.92%
As 188.979†	-3.7	-0.00195	mg/L	0.000861	-0.00195	mg/L	0.000861	44.24%
B 249.677†	11.5	0.00145	mg/L	0.000539	0.00145	mg/L	0.000539	37.08%
Ba 233.527†	0.6	0.00013	mg/L	0.000427	0.00013	mg/L	0.000427	328.43%
Be 313.042†	105.6	0.00016	mg/L	0.000020	0.00016	mg/L	0.000020	12.63%
Ca 317.933†	-51.4	-0.00360	mg/L	0.000132	-0.00360	mg/L	0.000132	3.68%
Cd 228.802†	-3.8	-0.00011	mg/L	0.000041	-0.00011	mg/L	0.000041	37.45%
Co 228.616†	-1.3	-0.00004	mg/L	0.000171	-0.00004	mg/L	0.000171	446.04%
Cr 267.716†	-0.4	-0.00006	mg/L	0.000806	-0.00006	mg/L	0.000806	>999.9%
Cu 324.752†	-50.9	-0.00020	mg/L	0.000050	-0.00020	mg/L	0.000050	25.04%
Fe 273.955†	-6.3	-0.00531	mg/L	0.002044	-0.00531	mg/L	0.002044	38.46%
K 766.490†	-18.5	-0.00932	mg/L	0.010384	-0.00932	mg/L	0.010384	111.40%
Mg 279.077†	-6.8	-0.00455	mg/L	0.002272	-0.00455	mg/L	0.002272	49.95%
Mn 257.610†	11.5	0.00034	mg/L	0.000053	0.00034	mg/L	0.000053	15.71%
Mo 202.031†	12.1	0.00063	mg/L	0.000287	0.00063	mg/L	0.000287	45.92%
Na 589.592†	-43.4	-0.00336	mg/L	0.000355	-0.00336	mg/L	0.000355	10.59%
Na 330.237†	-3.9	-0.1369	mg/L	0.25083	-0.1369	mg/L	0.25083	183.22%
Ni 231.604†	5.5	0.00130	mg/L	0.001064	0.00130	mg/L	0.001064	81.85%
Pb 220.353†	-1.1	-0.00014	mg/L	0.000273	-0.00014	mg/L	0.000273	193.20%
Sb 206.836†	10.8	0.00342	mg/L	0.000616	0.00342	mg/L	0.000616	18.04%
Se 196.026†	-1.8	-0.00125	mg/L	0.002505	-0.00125	mg/L	0.002505	199.69%
Si 288.158†	0.8	0.00040	mg/L	0.001830	0.00040	mg/L	0.001830	452.73%
Sn 189.927†	0.1	0.00002	mg/L	0.000561	0.00002	mg/L	0.000561	>999.9%
Sr 421.552†	162.2	0.00017	mg/L	0.000024	0.00017	mg/L	0.000024	14.19%
Ti 334.903†	25.4	0.00126	mg/L	0.001431	0.00126	mg/L	0.001431	113.31%
Tl 190.801†	-1.4	-0.00052	mg/L	0.000988	-0.00052	mg/L	0.000988	189.22%
V 292.402†	-24.5	-0.00018	mg/L	0.000154	-0.00018	mg/L	0.000154	84.06%
Zn 206.200†	0.8	0.00020	mg/L	0.000096	0.00020	mg/L	0.000096	47.58%

Sequence No.: 20
Sample ID: VR31 D SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 314
Date Collected: 11/14/2012 12:17:15 PM
Data Type: Original

Nebulizer Parameters: VR31 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2498658.7	100.7	%	0.49				0.49%
ScR 361.383	330903.8	103.1	%	0.59				0.57%
Ag 328.068†	-367.8	-0.00197	mg/L	0.000206	-0.00394	mg/L	0.000412	10.45%
Al 308.215†	247598.7	138.8	mg/L	3.47	277.7	mg/L	6.94	2.50%
As 188.979†	-143.1	0.1297	mg/L	0.00124	0.2593	mg/L	0.00248	0.95%
B 249.677†	75.0	0.00935	mg/L	0.001314	0.01869	mg/L	0.002629	14.06%
Ba 233.527†	11114.4	2.279	mg/L	0.0794	4.558	mg/L	0.1589	3.49%
Be 313.042†	2689.8	0.00396	mg/L	0.000151	0.00792	mg/L	0.000301	3.80%
Ca 317.933†	489428.2	34.26	mg/L	0.749	68.52	mg/L	1.498	2.19%
Cd 228.802†	544.4	0.01638	mg/L	0.001165	0.03276	mg/L	0.002330	7.11%
Co 228.616†	2738.2	0.06090	mg/L	0.005497	0.1218	mg/L	0.01099	9.03%
Cr 267.716†	2103.5	0.3367	mg/L	0.01168	0.6735	mg/L	0.02336	3.47%
Cu 324.752†	25912.9	0.1085	mg/L	0.00679	0.2169	mg/L	0.01357	6.26%
Fe 273.955†	235632.7	197.5	mg/L	4.21	395.0	mg/L	8.41	2.13%
K 766.490†	28519.2	14.38	mg/L	0.320	28.77	mg/L	0.640	2.22%
Mg 279.077†	77439.9	51.81	mg/L	1.194	103.6	mg/L	2.39	2.30%
Mn 257.610†	251412.2	7.415	mg/L	0.1653	14.83	mg/L	0.331	2.23%
Mo 202.031†	103.7	0.00498	mg/L	0.000166	0.00996	mg/L	0.000332	3.33%
Na 589.592†	29956.4	2.317	mg/L	0.0532	4.633	mg/L	0.1064	2.30%
Na 330.237†	28.7	2.207	mg/L	0.2173	4.413	mg/L	0.4346	9.85%
Ni 231.604†	652.5	0.1529	mg/L	0.00613	0.3058	mg/L	0.01227	4.01%
Pb 220.353†	3106.6	0.4247	mg/L	0.03106	0.8495	mg/L	0.06213	7.31%
Sb 206.836†	23.7	0.00705	mg/L	0.002804	0.01410	mg/L	0.005607	39.78%
Se 196.026†	13.5	0.00913	mg/L	0.001763	0.01826	mg/L	0.003526	19.31%
Si 288.158†	5763.8	2.756	mg/L	0.0899	5.513	mg/L	0.1799	3.26%
Sn 189.927†	-41.3	-0.00606	mg/L	0.000596	-0.01212	mg/L	0.001192	9.84%
Sr 421.552†	374654.7	0.3980	mg/L	0.00939	0.7960	mg/L	0.01879	2.36%
Ti 334.903†	146918.6	7.314	mg/L	0.1737	14.63	mg/L	0.347	2.37%
Tl 190.801†	-41.1	0.00357	mg/L	0.001093	0.00715	mg/L	0.002185	30.58%
V 292.402†	44246.4	0.3214	mg/L	0.02103	0.6428	mg/L	0.04207	6.54%
Zn 206.200†	6004.6	1.457	mg/L	0.0526	2.915	mg/L	0.1052	3.61%

Sequence No.: 21
Sample ID: VR31 E SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 315
Date Collected: 11/14/2012 12:21:17 PM
Data Type: Original

Nebulizer Parameters: VR31 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2558237.4	103.1	%	0.45				0.43%
ScR 361.383	332080.7	103.4	%	0.88				0.85%
Ag 328.068†	-401.3	-0.00215	mg/L	0.000036	-0.00429	mg/L	0.000072	1.67%
Al 308.215†	344457.0	193.1	mg/L	1.90	386.3	mg/L	3.79	0.98%
As 188.979†	-165.0	0.1305	mg/L	0.00552	0.2609	mg/L	0.01103	4.23%
B 249.677†	87.6	0.01090	mg/L	0.001139	0.02181	mg/L	0.002279	10.45%
Ba 233.527†	17952.0	3.696	mg/L	0.0452	7.391	mg/L	0.0905	1.22%
Be 313.042†	3379.3	0.00500	mg/L	0.000073	0.01000	mg/L	0.000145	1.45%
Ca 317.933†	533424.5	37.34	mg/L	0.344	74.68	mg/L	0.689	0.92%
Cd 228.802†	309.4	0.00856	mg/L	0.000488	0.01711	mg/L	0.000976	5.70%
Co 228.616†	3569.1	0.08309	mg/L	0.004915	0.1662	mg/L	0.00983	5.91%
Cr 267.716†	2180.7	0.3500	mg/L	0.00436	0.7000	mg/L	0.00871	1.24%
Cu 324.752†	38738.6	0.1601	mg/L	0.00675	0.3203	mg/L	0.01351	4.22%
Fe 273.955†	275464.3	230.9	mg/L	3.27	461.7	mg/L	6.53	1.41%
K 766.490†	35020.4	17.66	mg/L	0.124	35.33	mg/L	0.248	0.70%
Mg 279.077†	82787.0	55.38	mg/L	0.486	110.8	mg/L	0.97	0.88%
Mn 257.610†	250263.7	7.381	mg/L	0.0952	14.76	mg/L	0.190	1.29%
Mo 202.031†	93.3	0.00441	mg/L	0.000060	0.00882	mg/L	0.000121	1.37%
Na 589.592†	26944.4	2.084	mg/L	0.0154	4.167	mg/L	0.0307	0.74%
Na 330.237†	18.7	1.943	mg/L	0.1848	3.885	mg/L	0.3696	9.51%
Ni 231.604†	784.1	0.1837	mg/L	0.00215	0.3675	mg/L	0.00431	1.17%
Pb 220.353†	2007.3	0.2951	mg/L	0.01569	0.5901	mg/L	0.03137	5.32%
Sb 206.836†	13.2	0.00390	mg/L	0.002322	0.00781	mg/L	0.004643	59.48%
Se 196.026†	24.2	0.01658	mg/L	0.004845	0.03316	mg/L	0.009691	29.23%
Si 288.158†	7515.7	3.593	mg/L	0.0193	7.186	mg/L	0.0385	0.54%
Sn 189.927†	-46.3	-0.00699	mg/L	0.001657	-0.01399	mg/L	0.003315	23.70%
Sr 421.552†	436589.3	0.4638	mg/L	0.00447	0.9276	mg/L	0.00894	0.96%
Ti 334.903†	155891.2	7.760	mg/L	0.0736	15.52	mg/L	0.147	0.95%
Tl 190.801†	-50.9	0.00312	mg/L	0.002398	0.00624	mg/L	0.004797	76.81%
V 292.402†	49515.0	0.3593	mg/L	0.01461	0.7187	mg/L	0.02921	4.07%
Zn 206.200†	6099.9	1.480	mg/L	0.0145	2.961	mg/L	0.0290	0.98%

Sequence No.: 22
Sample ID: VR31 F SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 316
Date Collected: 11/14/2012 12:25:03 PM
Data Type: Original

Nebulizer Parameters: VR31 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2561803.4	103.2	%	0.62				0.60%
ScR 361.383	336009.8	104.6	%	0.84				0.80%
Ag 328.068†	-503.3	-0.00270	mg/L	0.000019	-0.00540	mg/L	0.000037	0.69%
Al 308.215†	405165.2	227.2	mg/L	2.70	454.4	mg/L	5.40	1.19%
As 188.979†	-205.8	0.1146	mg/L	0.00113	0.2292	mg/L	0.00227	0.99%
B 249.677†	56.2	0.00692	mg/L	0.000568	0.01384	mg/L	0.001135	8.20%
Ba 233.527†	14309.5	2.934	mg/L	0.0422	5.869	mg/L	0.0844	1.44%
Be 313.042†	4148.1	0.00616	mg/L	0.000108	0.01232	mg/L	0.000217	1.76%
Ca 317.933†	590571.5	41.34	mg/L	0.446	82.69	mg/L	0.892	1.08%
Cd 228.802†	278.5	0.00755	mg/L	0.000201	0.01510	mg/L	0.000403	2.67%
Co 228.616†	3624.7	0.08399	mg/L	0.003418	0.1680	mg/L	0.00684	4.07%
Cr 267.716†	2543.9	0.4078	mg/L	0.00544	0.8155	mg/L	0.01087	1.33%
Cu 324.752†	54502.8	0.2228	mg/L	0.00775	0.4456	mg/L	0.01550	3.48%
Fe 273.955†	302265.4	253.3	mg/L	1.19	506.6	mg/L	2.39	0.47%
K 766.490†	36851.3	18.59	mg/L	0.334	37.17	mg/L	0.667	1.80%
Mg 279.077†	99457.6	66.54	mg/L	0.740	133.1	mg/L	1.48	1.11%
Mn 257.610†	194941.9	5.749	mg/L	0.0443	11.50	mg/L	0.089	0.77%
Mo 202.031†	90.1	0.00420	mg/L	0.000290	0.00839	mg/L	0.000580	6.91%
Na 589.592†	33245.3	2.571	mg/L	0.0428	5.142	mg/L	0.0856	1.66%
Na 330.237†	30.1	2.479	mg/L	0.1996	4.959	mg/L	0.3991	8.05%
Ni 231.604†	1058.1	0.2480	mg/L	0.00337	0.4959	mg/L	0.00673	1.36%
Pb 220.353†	2057.6	0.3088	mg/L	0.00986	0.6176	mg/L	0.01971	3.19%
Sb 206.836†	17.4	0.00473	mg/L	0.003446	0.00947	mg/L	0.006893	72.81%
Se 196.026†	37.1	0.02546	mg/L	0.007065	0.05091	mg/L	0.014131	27.75%
Si 288.158†	10701.4	5.114	mg/L	0.0557	10.23	mg/L	0.111	1.09%
Sn 189.927†	-56.8	-0.00936	mg/L	0.001646	-0.01872	mg/L	0.003292	17.59%
Sr 421.552†	422809.0	0.4492	mg/L	0.00660	0.8983	mg/L	0.01319	1.47%
Ti 334.903†	160432.0	7.986	mg/L	0.0853	15.97	mg/L	0.171	1.07%
Tl 190.801†	-53.8	0.00415	mg/L	0.002212	0.00830	mg/L	0.004424	53.30%
V 292.402†	58057.6	0.4221	mg/L	0.01417	0.8442	mg/L	0.02833	3.36%
Zn 206.200†	5104.8	1.239	mg/L	0.0143	2.478	mg/L	0.0286	1.15%

Sequence No.: 23
Sample ID: VR31 G SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 317
Date Collected: 11/14/2012 12:28:50 PM
Data Type: Original

Nebulizer Parameters: VR31 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2550711.7	102.8	%	0.15				0.14%
ScR 361.383	333871.5	104.0	%	0.54				0.52%
Ag 328.068†	-220.5	-0.00111	mg/L	0.000323	-0.00222	mg/L	0.000645	29.04%
Al 308.215†	499908.8	280.3	mg/L	2.17	560.6	mg/L	4.34	0.77%
As 188.979†	-237.6	0.1294	mg/L	0.00301	0.2587	mg/L	0.00602	2.33%
B 249.677†	109.6	0.01362	mg/L	0.000506	0.02724	mg/L	0.001013	3.72%
Ba 233.527†	16484.6	3.383	mg/L	0.0093	6.765	mg/L	0.0185	0.27%
Be 313.042†	6357.3	0.00952	mg/L	0.000043	0.01904	mg/L	0.000085	0.45%
Ca 317.933†	690867.3	48.36	mg/L	0.465	96.73	mg/L	0.930	0.96%
Cd 228.802†	571.5	0.01697	mg/L	0.000734	0.03394	mg/L	0.001468	4.33%
Co 228.616†	4819.9	0.1154	mg/L	0.00454	0.2308	mg/L	0.00908	3.94%
Cr 267.716†	2552.1	0.4093	mg/L	0.00240	0.8187	mg/L	0.00480	0.59%
Cu 324.752†	107343.6	0.4310	mg/L	0.01370	0.8620	mg/L	0.02739	3.18%
Fe 273.955†	332132.8	278.4	mg/L	4.17	556.7	mg/L	8.35	1.50%
K 766.490†	44058.9	22.22	mg/L	0.068	44.44	mg/L	0.137	0.31%
Mg 279.077†	95799.8	64.08	mg/L	0.720	128.2	mg/L	1.44	1.12%
Mn 257.610†	516348.6	15.23	mg/L	0.188	30.45	mg/L	0.376	1.23%
Mo 202.031†	140.3	0.00672	mg/L	0.000762	0.01344	mg/L	0.001524	11.34%
Na 589.592†	35987.1	2.783	mg/L	0.0106	5.566	mg/L	0.0212	0.38%
Na 330.237†	26.4	2.419	mg/L	0.1173	4.839	mg/L	0.2347	4.85%
Ni 231.604†	1322.4	0.3099	mg/L	0.00159	0.6198	mg/L	0.00318	0.51%
Pb 220.353†	1605.6	0.2621	mg/L	0.00826	0.5242	mg/L	0.01653	3.15%
Sb 206.836†	26.6	0.00810	mg/L	0.000723	0.01620	mg/L	0.001446	8.93%
Se 196.026†	43.8	0.03012	mg/L	0.005107	0.06024	mg/L	0.010214	16.96%
Si 288.158†	10326.8	4.935	mg/L	0.0534	9.870	mg/L	0.1068	1.08%
Sn 189.927†	-65.1	-0.01060	mg/L	0.001696	-0.02120	mg/L	0.003393	16.00%
Sr 421.552†	556279.3	0.5910	mg/L	0.00352	1.182	mg/L	0.0070	0.60%
Ti 334.903†	183132.1	9.116	mg/L	0.0897	18.23	mg/L	0.179	0.98%
Tl 190.801†	-71.7	-0.00028	mg/L	0.000567	-0.00056	mg/L	0.001134	203.29%
V 292.402†	58921.4	0.4285	mg/L	0.01279	0.8570	mg/L	0.02559	2.99%
Zn 206.200†	7422.7	1.802	mg/L	0.0127	3.603	mg/L	0.0253	0.70%

Sequence No.: 24
Sample ID: VR31 H SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 318
Date Collected: 11/14/2012 12:32:51 PM
Data Type: Original

Nebulizer Parameters: VR31 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2544178.9	102.5	%	0.18				0.17%
ScR 361.383	332535.3	103.6	%	1.24				1.20%
Ag 328.068†	-411.8	-0.00225	mg/L	0.000208	-0.00449	mg/L	0.000415	9.25%
Al 308.215†	280544.8	157.3	mg/L	2.29	314.6	mg/L	4.58	1.45%
As 188.979†	-92.0	0.1066	mg/L	0.00300	0.2131	mg/L	0.00600	2.82%
B 249.677†	98.1	0.01231	mg/L	0.001039	0.02462	mg/L	0.002078	8.44%
Ba 233.527†	15389.5	3.171	mg/L	0.0604	6.342	mg/L	0.1208	1.90%
Be 313.042†	3274.2	0.00489	mg/L	0.000081	0.00978	mg/L	0.000162	1.66%
Ca 317.933†	707312.1	49.52	mg/L	0.655	99.03	mg/L	1.310	1.32%
Cd 228.802†	589.6	0.01782	mg/L	0.001416	0.03564	mg/L	0.002832	7.95%
Co 228.616†	2279.2	0.05138	mg/L	0.004113	0.1028	mg/L	0.00823	8.01%
Cr 267.716†	1058.3	0.1714	mg/L	0.00320	0.3428	mg/L	0.00641	1.87%
Cu 324.752†	29962.3	0.1241	mg/L	0.00686	0.2483	mg/L	0.01371	5.52%
Fe 273.955†	216076.8	181.1	mg/L	2.57	362.2	mg/L	5.14	1.42%
K 766.490†	30834.5	15.55	mg/L	0.126	31.10	mg/L	0.253	0.81%
Mg 279.077†	47624.3	31.83	mg/L	0.386	63.66	mg/L	0.772	1.21%
Mn 257.610†	273964.2	8.079	mg/L	0.1127	16.16	mg/L	0.225	1.39%
Mo 202.031†	92.1	0.00423	mg/L	0.000359	0.00845	mg/L	0.000718	8.50%
Na 589.592†	23287.8	1.801	mg/L	0.0241	3.602	mg/L	0.0481	1.34%
Na 330.237†	25.7	1.724	mg/L	0.1867	3.448	mg/L	0.3735	10.83%
Ni 231.604†	610.3	0.1430	mg/L	0.00253	0.2860	mg/L	0.00506	1.77%
Pb 220.353†	7597.8	1.007	mg/L	0.0633	2.013	mg/L	0.1266	6.29%
Sb 206.836†	19.0	0.00679	mg/L	0.002014	0.01358	mg/L	0.004027	29.65%
Se 196.026†	16.7	0.01145	mg/L	0.005797	0.02290	mg/L	0.011594	50.62%
Si 288.158†	14800.7	7.066	mg/L	0.1341	14.13	mg/L	0.268	1.90%
Sn 189.927†	-50.6	-0.00695	mg/L	0.000538	-0.01391	mg/L	0.001075	7.73%
Sr 421.552†	644247.7	0.6844	mg/L	0.00878	1.369	mg/L	0.0176	1.28%
Ti 334.903†	111799.3	5.564	mg/L	0.0801	11.13	mg/L	0.160	1.44%
Tl 190.801†	-34.9	0.00469	mg/L	0.002214	0.00938	mg/L	0.004428	47.23%
V 292.402†	30915.0	0.2230	mg/L	0.01293	0.4460	mg/L	0.02585	5.80%
Zn 206.200†	5708.4	1.386	mg/L	0.0261	2.771	mg/L	0.0523	1.89%

Sequence No.: 25
Sample ID: VR31 I SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 319
Date Collected: 11/14/2012 12:36:37 PM
Data Type: Original

Nebulizer Parameters: VR31 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2555722.9	103.0	%	0.17				0.17%
ScR 361.383	330428.4	102.9	%	0.43				0.41%
Ag 328.068†	-439.5	-0.00238	mg/L	0.000029	-0.00475	mg/L	0.000059	1.23%
Al 308.215†	310287.7	174.0	mg/L	2.46	348.0	mg/L	4.91	1.41%
As 188.979†	-39.4	0.1682	mg/L	0.00640	0.3363	mg/L	0.01279	3.80%
B 249.677†	131.3	0.01646	mg/L	0.000624	0.03292	mg/L	0.001247	3.79%
Ba 233.527†	13491.0	2.771	mg/L	0.0536	5.543	mg/L	0.1073	1.94%
Be 313.042†	3344.7	0.00497	mg/L	0.000089	0.00994	mg/L	0.000178	1.79%
Ca 317.933†	505762.5	35.41	mg/L	0.445	70.81	mg/L	0.889	1.26%
Cd 228.802†	901.4	0.02744	mg/L	0.001322	0.05488	mg/L	0.002643	4.82%
Co 228.616†	3066.8	0.07124	mg/L	0.003735	0.1425	mg/L	0.00747	5.24%
Cr 267.716†	1256.7	0.2026	mg/L	0.00416	0.4051	mg/L	0.00832	2.05%
Cu 324.752†	30641.0	0.1277	mg/L	0.00502	0.2554	mg/L	0.01004	3.93%
Fe 273.955†	249048.2	208.7	mg/L	2.61	417.4	mg/L	5.23	1.25%
K 766.490†	39622.3	19.98	mg/L	0.420	39.97	mg/L	0.839	2.10%
Mg 279.077†	67129.2	44.89	mg/L	0.603	89.78	mg/L	1.206	1.34%
Mn 257.610†	440390.7	12.99	mg/L	0.169	25.97	mg/L	0.338	1.30%
Mo 202.031†	100.0	0.00478	mg/L	0.000176	0.00957	mg/L	0.000353	3.69%
Na 589.592†	24429.4	1.889	mg/L	0.0305	3.778	mg/L	0.0610	1.62%
Na 330.237†	17.6	1.507	mg/L	0.1062	3.015	mg/L	0.2124	7.05%
Ni 231.604†	544.0	0.1275	mg/L	0.00267	0.2550	mg/L	0.00533	2.09%
Pb 220.353†	9121.4	1.205	mg/L	0.0582	2.411	mg/L	0.1163	4.83%
Sb 206.836†	28.4	0.01019	mg/L	0.002478	0.02039	mg/L	0.004956	24.31%
Se 196.026†	24.5	0.01679	mg/L	0.007267	0.03358	mg/L	0.014534	43.28%
Si 288.158†	10737.9	5.129	mg/L	0.0385	10.26	mg/L	0.077	0.75%
Sn 189.927†	-44.8	-0.00693	mg/L	0.000234	-0.01387	mg/L	0.000467	3.37%
Sr 421.552†	474490.9	0.5041	mg/L	0.00769	1.008	mg/L	0.0154	1.53%
Ti 334.903†	134517.3	6.696	mg/L	0.0843	13.39	mg/L	0.169	1.26%
Tl 190.801†	-44.3	0.00359	mg/L	0.003603	0.00717	mg/L	0.007206	100.44%
V 292.402†	42795.9	0.3108	mg/L	0.01144	0.6217	mg/L	0.02287	3.68%
Zn 206.200†	8024.0	1.948	mg/L	0.0314	3.895	mg/L	0.0628	1.61%

Sequence No.: 26
Sample ID: VR31 J SWC
Analyst: BA
Dilution: 2.000000X

Autosampler Location: 320
Date Collected: 11/14/2012 12:40:23 PM
Data Type: Original

Nebulizer Parameters: VR31 J SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR31 J SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2520661.9	101.6	%	0.48				0.48%
ScR 361.383	325403.0	101.3	%	0.74				0.73%
Ag 328.068†	-426.9	-0.00229	mg/L	0.000120	-0.00458	mg/L	0.000240	5.24%
Al 308.215†	203909.5	114.3	mg/L	2.33	228.7	mg/L	4.65	2.04%
As 188.979†	-98.2	0.1378	mg/L	0.00430	0.2757	mg/L	0.00860	3.12%
B 249.677†	100.5	0.01259	mg/L	0.000895	0.02518	mg/L	0.001790	7.11%
Ba 233.527†	4618.6	0.9251	mg/L	0.02586	1.850	mg/L	0.0517	2.80%
Be 313.042†	2985.3	0.00441	mg/L	0.000095	0.00882	mg/L	0.000191	2.16%
Ca 317.933†	1134943.7	79.45	mg/L	1.404	158.9	mg/L	2.81	1.77%
Cd 228.802†	433.2	0.01245	mg/L	0.001512	0.02490	mg/L	0.003025	12.15%
Co 228.616†	2737.8	0.06167	mg/L	0.008640	0.1233	mg/L	0.01728	14.01%
Cr 267.716†	1727.8	0.2771	mg/L	0.00752	0.5542	mg/L	0.01503	2.71%
Cu 324.752†	46804.7	0.1913	mg/L	0.02141	0.3826	mg/L	0.04282	11.19%
Fe 273.955†	257635.7	215.9	mg/L	3.95	431.8	mg/L	7.90	1.83%
K 766.490†	26754.7	13.49	mg/L	0.225	26.99	mg/L	0.449	1.66%
Mg 279.077†	86018.4	57.55	mg/L	1.074	115.1	mg/L	2.15	1.87%
Mn 257.610†	138361.5	4.081	mg/L	0.0707	8.162	mg/L	0.1414	1.73%
Mo 202.031†	146.3	0.00670	mg/L	0.000565	0.01340	mg/L	0.001130	8.43%
Na 589.592†	34624.5	2.678	mg/L	0.0455	5.355	mg/L	0.0909	1.70%
Na 330.237†	23.0	2.021	mg/L	0.2211	4.041	mg/L	0.4421	10.94%
Ni 231.604†	680.8	0.1595	mg/L	0.00432	0.3191	mg/L	0.00864	2.71%
Pb 220.353†	4495.3	0.5963	mg/L	0.06921	1.193	mg/L	0.1384	11.61%
Sb 206.836†	19.5	0.00645	mg/L	0.000247	0.01290	mg/L	0.000493	3.83%
Se 196.026†	7.2	0.00479	mg/L	0.002463	0.00958	mg/L	0.004927	51.45%
Si 288.158†	4414.2	2.113	mg/L	0.0654	4.227	mg/L	0.1308	3.10%
Sn 189.927†	-66.6	-0.00747	mg/L	0.000720	-0.01494	mg/L	0.001440	9.64%
Sr 421.552†	987260.5	1.049	mg/L	0.0194	2.098	mg/L	0.0389	1.85%
Ti 334.903†	137408.6	6.838	mg/L	0.1289	13.68	mg/L	0.258	1.89%
Tl 190.801†	-32.5	0.00880	mg/L	0.002439	0.01761	mg/L	0.004878	27.71%
V 292.402†	48657.2	0.3532	mg/L	0.04044	0.7063	mg/L	0.08087	11.45%
Zn 206.200†	4454.4	1.081	mg/L	0.0257	2.162	mg/L	0.0514	2.38%

Sequence No.: 27
Sample ID: VR31 K SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 321
Date Collected: 11/14/2012 12:44:26 PM
Data Type: Original

Nebulizer Parameters: VR31 K SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2517222.2	101.4	%	0.77				0.76%
ScR 361.383	329338.1	102.6	%	0.59				0.57%
Ag 328.068†	-257.7	-0.00134	mg/L	0.000096	-0.00268	mg/L	0.000193	7.19%
Al 308.215†	300429.0	168.5	mg/L	1.20	336.9	mg/L	2.41	0.71%
As 188.979†	56.2	0.2817	mg/L	0.00418	0.5635	mg/L	0.00836	1.48%
B 249.677†	131.8	0.01645	mg/L	0.000472	0.03290	mg/L	0.000944	2.87%
Ba 233.527†	11617.4	2.374	mg/L	0.0206	4.747	mg/L	0.0412	0.87%
Be 313.042†	3861.2	0.00572	mg/L	0.000028	0.01144	mg/L	0.000056	0.49%
Ca 317.933†	970827.2	67.96	mg/L	0.579	135.9	mg/L	1.16	0.85%
Cd 228.802†	4802.0	0.1531	mg/L	0.00915	0.3062	mg/L	0.01829	5.97%
Co 228.616†	4537.3	0.1080	mg/L	0.00709	0.2161	mg/L	0.01418	6.56%
Cr 267.716†	4083.8	0.6515	mg/L	0.00527	1.303	mg/L	0.0105	0.81%
Cu 324.752†	87936.8	0.3539	mg/L	0.01638	0.7079	mg/L	0.03276	4.63%
Fe 273.955†	308310.1	258.4	mg/L	2.39	516.8	mg/L	4.77	0.92%
K 766.490†	78849.9	39.77	mg/L	0.338	79.54	mg/L	0.676	0.85%
Mg 279.077†	113378.4	75.87	mg/L	0.583	151.7	mg/L	1.17	0.77%
Mn 257.610†	268972.8	7.933	mg/L	0.0712	15.87	mg/L	0.142	0.90%
Mo 202.031†	111.0	0.00498	mg/L	0.000278	0.00995	mg/L	0.000557	5.59%
Na 589.592†	26273.8	2.032	mg/L	0.0183	4.064	mg/L	0.0366	0.90%
Na 330.237†	40.1	1.530	mg/L	0.0772	3.060	mg/L	0.1544	5.05%
Ni 231.604†	1245.8	0.2920	mg/L	0.00204	0.5839	mg/L	0.00407	0.70%
Pb 220.353†	29863.5	3.868	mg/L	0.2147	7.735	mg/L	0.4295	5.55%
Sb 206.836†	91.7	0.02496	mg/L	0.003317	0.04991	mg/L	0.006634	13.29%
Se 196.026†	15.3	0.01035	mg/L	0.001528	0.02070	mg/L	0.003056	14.76%
Si 288.158†	4379.8	2.099	mg/L	0.0102	4.199	mg/L	0.0203	0.48%
Sn 189.927†	-30.4	0.00146	mg/L	0.001509	0.00293	mg/L	0.003018	103.11%
Sr 421.552†	591900.5	0.6288	mg/L	0.00480	1.258	mg/L	0.0096	0.76%
Ti 334.903†	179776.4	8.948	mg/L	0.0693	17.90	mg/L	0.139	0.78%
Tl 190.801†	-49.3	0.00641	mg/L	0.002346	0.01282	mg/L	0.004692	36.60%
V 292.402†	49649.0	0.3601	mg/L	0.01735	0.7202	mg/L	0.03471	4.82%
Zn 206.200†	24181.1	5.869	mg/L	0.0379	11.74	mg/L	0.076	0.65%

Sequence No.: 28
Sample ID: VR31 L SWC
Analyst: BA
Dilution: 2.000000X

Del

Autosampler Location: 322
Date Collected: 11/14/2012 12:48:29 PM
Data Type: Original

Nebulizer Parameters: VR31 L SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2553300.3	102.9	%	0.07				0.07%
ScR 361.383	329351.6	102.6	%	0.60				0.59%
Ag 328.068†	-364.4	-0.00195	mg/L	0.000059	-0.00391	mg/L	0.000118	3.01%
Al 308.215†	409696.6	229.7	mg/L	2.30	459.5	mg/L	4.59	1.00%
As 188.979†	-8.4	0.1913	mg/L	0.00528	0.3827	mg/L	0.01057	2.76%
B 249.677†	113.0	0.01402	mg/L	0.000241	0.02803	mg/L	0.000482	1.72%
Ba 233.527†	11288.8	2.297	mg/L	0.0406	4.595	mg/L	0.0811	1.76%
Be 313.042†	5811.9	0.00874	mg/L	0.000146	0.01747	mg/L	0.000293	1.68%
Ca 317.933†	821442.6	57.50	mg/L	0.629	115.0	mg/L	1.26	1.09%
Cd 228.802†	1079.6	0.03238	mg/L	0.001693	0.06476	mg/L	0.003385	5.23%
Co 228.616†	5377.9	0.1351	mg/L	0.00619	0.2702	mg/L	0.01238	4.58%
Cr 267.716†	2081.5	0.3362	mg/L	0.00423	0.6723	mg/L	0.00847	1.26%
Cu 324.752†	82622.9	0.3357	mg/L	0.01518	0.6715	mg/L	0.03037	4.52%
Fe 273.955†	365314.6	306.2	mg/L	2.84	612.3	mg/L	5.68	0.93%
K 766.490†	61726.5	31.13	mg/L	0.506	62.27	mg/L	1.012	1.63%
Mg 279.077†	89721.2	59.99	mg/L	0.561	120.0	mg/L	1.12	0.94%
Mn 257.610†	409100.6	12.06	mg/L	0.126	24.13	mg/L	0.253	1.05%
Mo 202.031†	201.4	0.00979	mg/L	0.000482	0.01958	mg/L	0.000965	4.93%
Na 589.592†	13861.6	1.072	mg/L	0.0179	2.144	mg/L	0.0358	1.67%
Na 330.237†	-6.3	0.6938	mg/L	0.15708	1.388	mg/L	0.3142	22.64%
Ni 231.604†	1486.0	0.3482	mg/L	0.00453	0.6965	mg/L	0.00906	1.30%
Pb 220.353†	7559.0	1.014	mg/L	0.0492	2.028	mg/L	0.0984	4.85%
Sb 206.836†	56.0	0.01710	mg/L	0.002775	0.03419	mg/L	0.005550	16.23%
Se 196.026†	33.6	0.02308	mg/L	0.001209	0.04616	mg/L	0.002418	5.24%
Si 288.158†	5588.7	2.674	mg/L	0.0142	5.348	mg/L	0.0285	0.53%
Sn 189.927†	-57.5	-0.00766	mg/L	0.001205	-0.01532	mg/L	0.002409	15.72%
Sr 421.552†	511826.2	0.5437	mg/L	0.00661	1.087	mg/L	0.0132	1.22%
Ti 334.903†	140064.7	6.971	mg/L	0.0672	13.94	mg/L	0.134	0.96%
Tl 190.801†	-69.9	0.00374	mg/L	0.003591	0.00748	mg/L	0.007183	96.08%
V 292.402†	42768.7	0.3075	mg/L	0.01289	0.6150	mg/L	0.02577	4.19%
Zn 206.200†	8349.3	2.027	mg/L	0.0328	4.053	mg/L	0.0655	1.62%

Sequence No.: 29
Sample ID: CV 3
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/14/2012 12:52:15 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2533428.0	102.1	%	0.15				0.14%
ScR 361.383	321933.3	100.3	%	1.58				1.58%
Ag 328.068†	170403.9	0.9568	mg/L	0.00142	0.9568	mg/L	0.00142	0.15%
Al 308.215†	3743.3	2.065	mg/L	0.0275	2.065	mg/L	0.0275	1.33%
As 188.979†	3584.3	1.961	mg/L	0.0090	1.961	mg/L	0.0090	0.46%
B 249.677†	7564.9	0.9578	mg/L	0.00984	0.9578	mg/L	0.00984	1.03%
Ba 233.527†	5014.4	1.042	mg/L	0.0094	1.042	mg/L	0.0094	0.91%
Be 313.042†	620384.0	0.9481	mg/L	0.01051	0.9481	mg/L	0.01051	1.11%
Ca 317.933†	28384.8	1.987	mg/L	0.0213	1.987	mg/L	0.0213	1.07%
Cd 228.802†	31764.6	1.017	mg/L	0.0053	1.017	mg/L	0.0053	0.52%
Co 228.616†	36027.2	1.022	mg/L	0.0028	1.022	mg/L	0.0028	0.28%
Cr 267.716†	6556.1	1.042	mg/L	0.0081	1.042	mg/L	0.0081	0.78%
Cu 324.752†	253156.6	0.9927	mg/L	0.00157	0.9927	mg/L	0.00157	0.16%
Fe 273.955†	2579.2	2.155	mg/L	0.0228	2.155	mg/L	0.0228	1.06%
K 766.490†	39568.9	19.96	mg/L	0.362	19.96	mg/L	0.362	1.81%
Mg 279.077†	3089.3	2.078	mg/L	0.0212	2.078	mg/L	0.0212	1.02%
Mn 257.610†	34051.5	1.005	mg/L	0.0114	1.005	mg/L	0.0114	1.14%
Mo 202.031†	19888.4	1.030	mg/L	0.0023	1.030	mg/L	0.0023	0.23%
Na 589.592†	626768.5	48.47	mg/L	0.744	48.47	mg/L	0.744	1.54%
Na 330.237†	1462.8	51.94	mg/L	0.469	51.94	mg/L	0.469	0.90%
Ni 231.604†	4147.4	0.9722	mg/L	0.00766	0.9722	mg/L	0.00766	0.79%
Pb 220.353†	15559.7	2.000	mg/L	0.0070	2.000	mg/L	0.0070	0.35%
Sb 206.836†	6684.9	2.117	mg/L	0.0083	2.117	mg/L	0.0083	0.39%
Se 196.026†	2772.4	1.925	mg/L	0.0075	1.925	mg/L	0.0075	0.39%
Si 288.158†	4482.7	2.138	mg/L	0.0252	2.138	mg/L	0.0252	1.18%
Sn 189.927†	3734.4	1.028	mg/L	0.0041	1.028	mg/L	0.0041	0.39%
Sr 421.552†	885931.8	0.9412	mg/L	0.01325	0.9412	mg/L	0.01325	1.41%
Ti 334.903†	20949.6	1.042	mg/L	0.0125	1.042	mg/L	0.0125	1.20%
Tl 190.801†	4999.3	1.919	mg/L	0.0065	1.919	mg/L	0.0065	0.34%
V 292.402†	131545.7	0.9853	mg/L	0.00111	0.9853	mg/L	0.00111	0.11%
Zn 206.200†	4189.6	1.017	mg/L	0.0087	1.017	mg/L	0.0087	0.85%

Sequence No.: 30
Sample ID: CB 3
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/14/2012 12:57:08 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2533787.4	102.1	%	0.83				0.82%
ScR 361.383	327578.1	102.0	%	0.29				0.29%
Ag 328.068†	2.4	0.00001	mg/L	0.000105	0.00001	mg/L	0.000105	790.04%
Al 308.215†	8.9	0.00496	mg/L	0.003214	0.00496	mg/L	0.003214	64.79%
As 188.979†	-2.5	-0.00135	mg/L	0.001258	-0.00135	mg/L	0.001258	93.28%
B 249.677†	7.6	0.00097	mg/L	0.001229	0.00097	mg/L	0.001229	127.04%
Ba 233.527†	-0.6	-0.00013	mg/L	0.001076	-0.00013	mg/L	0.001076	810.96%
Be 313.042†	106.8	0.00016	mg/L	0.000059	0.00016	mg/L	0.000059	36.18%
Ca 317.933†	-56.9	-0.00398	mg/L	0.000776	-0.00398	mg/L	0.000776	19.50%
Cd 228.802†	-8.3	-0.00026	mg/L	0.000095	-0.00026	mg/L	0.000095	36.28%
Co 228.616†	6.3	0.00018	mg/L	0.000187	0.00018	mg/L	0.000187	105.13%
Cr 267.716†	-6.0	-0.00095	mg/L	0.001531	-0.00095	mg/L	0.001531	160.50%
Cu 324.752†	-91.0	-0.00036	mg/L	0.000160	-0.00036	mg/L	0.000160	44.78%
Fe 273.955†	-2.1	-0.00176	mg/L	0.000833	-0.00176	mg/L	0.000833	47.22%
K 766.490†	-5.9	-0.00299	mg/L	0.015605	-0.00299	mg/L	0.015605	522.45%
Mg 279.077†	-9.2	-0.00616	mg/L	0.000854	-0.00616	mg/L	0.000854	13.86%
Mn 257.610†	10.5	0.00031	mg/L	0.000062	0.00031	mg/L	0.000062	20.10%
Mo 202.031†	14.3	0.00074	mg/L	0.000202	0.00074	mg/L	0.000202	27.21%
Na 589.592†	-83.8	-0.00648	mg/L	0.001508	-0.00648	mg/L	0.001508	23.28%
Na 330.237†	-5.8	-0.2064	mg/L	0.41697	-0.2064	mg/L	0.41697	202.07%
Ni 231.604†	-1.1	-0.00025	mg/L	0.001609	-0.00025	mg/L	0.001609	644.55%
Pb 220.353†	-5.9	-0.00076	mg/L	0.000383	-0.00076	mg/L	0.000383	50.21%
Sb 206.836†	3.1	0.00098	mg/L	0.001158	0.00098	mg/L	0.001158	117.89%
Se 196.026†	-1.0	-0.00067	mg/L	0.003226	-0.00067	mg/L	0.003226	480.46%
Si 288.158†	4.7	0.00224	mg/L	0.002029	0.00224	mg/L	0.002029	90.73%
Sn 189.927†	-0.1	-0.00004	mg/L	0.000392	-0.00004	mg/L	0.000392	>999.9%
Sr 421.552†	128.1	0.00014	mg/L	0.000031	0.00014	mg/L	0.000031	23.04%
Ti 334.903†	19.4	0.00097	mg/L	0.000461	0.00097	mg/L	0.000461	47.74%
Tl 190.801†	-0.6	-0.00022	mg/L	0.000440	-0.00022	mg/L	0.000440	201.27%
V 292.402†	-34.5	-0.00026	mg/L	0.000064	-0.00026	mg/L	0.000064	24.54%
Zn 206.200†	1.2	0.00030	mg/L	0.000400	0.00030	mg/L	0.000400	134.37%

Analysis Begun

Start Time: 11/14/2012 1:03:30 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/14/2012 7:50:58 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1114.sif
Batch ID:
Results Data Set: I2121114
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VR31 A-L SWC
Analyst: BA
Dilution: 25.000000X
Autosampler Location: 323
Date Collected: 11/14/2012 1:03:31 PM
Data Type: Original

Nebulizer Parameters: VR31 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR31 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2535843.5	102.2	%	0.36				0.36%
ScR 361.383	326235.9	101.6	%	0.61				0.60%
Ag 328.068†	-62.8	-0.00034	mg/L	0.000276	-0.00857	mg/L	0.006912	80.61%
Al 308.215†	39122.7	21.94	mg/L	0.102	548.5	mg/L	2.55	0.46%
As 188.979†	-14.4	0.00941	mg/L	0.001273	0.2352	mg/L	0.03183	13.53%
B 249.677†	12.8	0.00161	mg/L	0.001132	0.04013	mg/L	0.028288	70.50%
Ba 233.527†	1764.4	0.3635	mg/L	0.00407	9.088	mg/L	0.1017	1.12%
Be 313.042†	557.0	0.00084	mg/L	0.000028	0.02094	mg/L	0.000712	3.40%
Ca 317.933†	58519.9	4.097	mg/L	0.0250	102.4	mg/L	0.63	0.61%
Cd 228.802†	29.0	0.00081	mg/L	0.000140	0.02024	mg/L	0.003499	17.29%
Co 228.616†	344.5	0.00831	mg/L	0.000098	0.2077	mg/L	0.00244	1.17%
Cr 267.716†	147.3	0.02370	mg/L	0.000880	0.5924	mg/L	0.02199	3.71%
Cu 324.752†	4495.4	0.01839	mg/L	0.000231	0.4596	mg/L	0.00576	1.25%
Fe 273.955†	24716.9	20.71	mg/L	0.107	517.9	mg/L	2.67	0.52%
K 766.490†	2479.2	1.250	mg/L	0.0192	31.26	mg/L	0.480	1.53%
Mg 279.077†	7309.7	4.889	mg/L	0.0255	122.2	mg/L	0.64	0.52%
Mn 257.610†	26999.3	0.7962	mg/L	0.00376	19.91	mg/L	0.094	0.47%
Mo 202.031†	9.8	0.00046	mg/L	0.000131	0.01157	mg/L	0.003272	28.29%
Na 589.592†	1686.4	0.1304	mg/L	0.00192	3.260	mg/L	0.0481	1.47%
Na 330.237†	-7.4	-0.1622	mg/L	0.23484	-4.055	mg/L	5.8711	144.77%
Ni 231.604†	84.8	0.01987	mg/L	0.000787	0.4966	mg/L	0.01968	3.96%
Pb 220.353†	322.4	0.04585	mg/L	0.001868	1.146	mg/L	0.0467	4.07%
Sb 206.836†	-1.2	-0.00034	mg/L	0.001468	-0.00859	mg/L	0.036691	427.38%
Se 196.026†	4.8	0.00331	mg/L	0.000843	0.08276	mg/L	0.021069	25.46%
Si 288.158†	813.5	0.3887	mg/L	0.00406	9.719	mg/L	0.1014	1.04%
Sn 189.927†	-8.3	-0.00168	mg/L	0.001104	-0.04191	mg/L	0.027598	65.85%
Sr 421.552†	42668.9	0.04533	mg/L	0.000219	1.133	mg/L	0.0055	0.48%
Ti 334.903†	12248.3	0.6097	mg/L	0.00365	15.24	mg/L	0.091	0.60%
Tl 190.801†	-7.2	-0.00075	mg/L	0.001149	-0.01886	mg/L	0.028726	152.29%
V 292.402†	4469.1	0.03247	mg/L	0.000103	0.8118	mg/L	0.00258	0.32%
Zn 206.200†	455.7	0.1106	mg/L	0.00100	2.765	mg/L	0.0250	0.91%

Sequence No.: 2
Sample ID: VR31 A SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 324
Date Collected: 11/14/2012 1:07:33 PM
Data Type: Original

Nebulizer Parameters: VR31 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541958.3	102.4	%	0.23				0.22%
ScR 361.383	334296.8	104.1	%	1.52				1.46%
Ag 328.068†	-158.8	-0.00085	mg/L	0.000048	-0.00423	mg/L	0.000240	5.67%
Al 308.215†	186594.9	104.6	mg/L	1.94	523.2	mg/L	9.71	1.86%
As 188.979†	-62.3	0.04734	mg/L	0.002736	0.2367	mg/L	0.01368	5.78%
B 249.677†	54.4	0.00680	mg/L	0.000846	0.03400	mg/L	0.004229	12.44%
Ba 233.527†	8150.2	1.679	mg/L	0.0259	8.394	mg/L	0.1293	1.54%
Be 313.042†	2227.3	0.00334	mg/L	0.000061	0.01670	mg/L	0.000305	1.83%
Ca 317.933†	280065.1	19.61	mg/L	0.403	98.03	mg/L	2.017	2.06%
Cd 228.802†	151.8	0.00428	mg/L	0.000085	0.02141	mg/L	0.000426	1.99%
Co 228.616†	1588.9	0.03817	mg/L	0.000210	0.1909	mg/L	0.00105	0.55%
Cr 267.716†	678.2	0.1091	mg/L	0.00167	0.5453	mg/L	0.00836	1.53%
Cu 324.752†	21786.7	0.08901	mg/L	0.000385	0.4451	mg/L	0.00192	0.43%
Fe 273.955†	116856.0	97.93	mg/L	1.702	489.7	mg/L	8.51	1.74%
K 766.490†	11618.4	5.860	mg/L	0.0892	29.30	mg/L	0.446	1.52%
Mg 279.077†	35800.6	23.95	mg/L	0.379	119.7	mg/L	1.90	1.58%
Mn 257.610†	127868.1	3.771	mg/L	0.0678	18.85	mg/L	0.339	1.80%
Mo 202.031†	47.5	0.00224	mg/L	0.000128	0.01120	mg/L	0.000638	5.70%
Na 589.592†	8436.0	0.6524	mg/L	0.01508	3.262	mg/L	0.0754	2.31%
Na 330.237†	4.0	0.6296	mg/L	0.21532	3.148	mg/L	1.0766	34.20%
Ni 231.604†	397.8	0.09322	mg/L	0.000387	0.4661	mg/L	0.00193	0.41%
Pb 220.353†	1487.4	0.2122	mg/L	0.00138	1.061	mg/L	0.0069	0.65%
Sb 206.836†	9.1	0.00312	mg/L	0.000973	0.01559	mg/L	0.004864	31.20%
Se 196.026†	17.4	0.01199	mg/L	0.007299	0.05993	mg/L	0.036493	60.90%
Si 288.158†	3685.7	1.762	mg/L	0.0391	8.808	mg/L	0.1956	2.22%
Sn 189.927†	-34.5	-0.00664	mg/L	0.000601	-0.03320	mg/L	0.003006	9.05%
Sr 421.552†	200138.9	0.2126	mg/L	0.00395	1.063	mg/L	0.0197	1.86%
Ti 334.903†	57706.5	2.872	mg/L	0.0518	14.36	mg/L	0.259	1.80%
Tl 190.801†	-23.6	0.00054	mg/L	0.002352	0.00270	mg/L	0.011758	435.80%
V 292.402†	20843.5	0.1514	mg/L	0.00081	0.7570	mg/L	0.00404	0.53%
Zn 206.200†	2094.5	0.5084	mg/L	0.00772	2.542	mg/L	0.0386	1.52%

Sequence No.: 3
Sample ID: VR31 ADUP SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 325
Date Collected: 11/14/2012 1:11:33 PM
Data Type: Original

Nebulizer Parameters: VR31 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2559710.4	103.2	%	0.50				0.48%
ScR 361.383	331874.4	103.4	%	1.32				1.28%
Ag 328.068†	-147.0	-0.00078	mg/L	0.000267	-0.00389	mg/L	0.001337	34.34%
Al 308.215†	192181.7	107.8	mg/L	1.13	538.8	mg/L	5.67	1.05%
As 188.979†	-54.3	0.04843	mg/L	0.002040	0.2421	mg/L	0.01020	4.21%
B 249.677†	48.5	0.00605	mg/L	0.001065	0.03023	mg/L	0.005323	17.61%
Ba 233.527†	8227.6	1.694	mg/L	0.0249	8.471	mg/L	0.1243	1.47%
Be 313.042†	2330.5	0.00350	mg/L	0.000057	0.01748	mg/L	0.000285	1.63%
Ca 317.933†	270927.1	18.97	mg/L	0.172	94.83	mg/L	0.861	0.91%
Cd 228.802†	146.5	0.00403	mg/L	0.000089	0.02016	mg/L	0.000444	2.20%
Co 228.616†	1704.8	0.04162	mg/L	0.000109	0.2081	mg/L	0.00055	0.26%
Cr 267.716†	706.7	0.1136	mg/L	0.00094	0.5681	mg/L	0.00468	0.82%
Cu 324.752†	21968.7	0.08997	mg/L	0.000518	0.4499	mg/L	0.00259	0.58%
Fe 273.955†	123347.6	103.4	mg/L	1.14	516.9	mg/L	5.69	1.10%
K 766.490†	10736.1	5.415	mg/L	0.0558	27.07	mg/L	0.279	1.03%
Mg 279.077†	38842.9	25.99	mg/L	0.277	129.9	mg/L	1.38	1.07%
Mn 257.610†	140394.8	4.140	mg/L	0.0424	20.70	mg/L	0.212	1.02%
Mo 202.031†	42.7	0.00200	mg/L	0.000377	0.01000	mg/L	0.001883	18.82%
Na 589.592†	7846.7	0.6068	mg/L	0.00721	3.034	mg/L	0.0360	1.19%
Na 330.237†	-1.4	0.4022	mg/L	0.05616	2.011	mg/L	0.2808	13.96%
Ni 231.604†	407.9	0.09558	mg/L	0.000850	0.4779	mg/L	0.00425	0.89%
Pb 220.353†	1371.2	0.1978	mg/L	0.00123	0.9891	mg/L	0.00615	0.62%
Sb 206.836†	7.4	0.00248	mg/L	0.001984	0.01240	mg/L	0.009919	79.97%
Se 196.026†	22.4	0.01547	mg/L	0.003076	0.07736	mg/L	0.015379	19.88%
Si 288.158†	3538.1	1.691	mg/L	0.0183	8.457	mg/L	0.0914	1.08%
Sn 189.927†	-35.7	-0.00707	mg/L	0.001485	-0.03537	mg/L	0.007425	20.99%
Sr 421.552†	193826.9	0.2059	mg/L	0.00223	1.030	mg/L	0.0111	1.08%
Ti 334.903†	55408.5	2.758	mg/L	0.0292	13.79	mg/L	0.146	1.06%
Tl 190.801†	-22.2	0.00163	mg/L	0.000460	0.00813	mg/L	0.002301	28.30%
V 292.402†	21635.1	0.1572	mg/L	0.00092	0.7862	mg/L	0.00462	0.59%
Zn 206.200†	2181.4	0.5295	mg/L	0.00713	2.647	mg/L	0.0356	1.35%

Sequence No.: 4
Sample ID: VR31 ASPK SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 326
Date Collected: 11/14/2012 1:15:33 PM
Data Type: Original

Nebulizer Parameters: VR31 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2556162.5	103.0	%	0.21				0.20%
ScR 361.383	333453.0	103.9	%	0.94				0.91%
Ag 328.068†	32973.6	0.1852	mg/L	0.00011	0.9259	mg/L	0.00053	0.06%
Al 308.215†	189502.0	106.3	mg/L	0.97	531.3	mg/L	4.84	0.91%
As 188.979†	1313.0	0.7842	mg/L	0.00603	3.921	mg/L	0.0301	0.77%
B 249.677†	63.4	0.00754	mg/L	0.000433	0.03769	mg/L	0.002166	5.75%
Ba 233.527†	11966.6	2.473	mg/L	0.0199	12.36	mg/L	0.099	0.80%
Be 313.042†	126280.4	0.1929	mg/L	0.00179	0.9647	mg/L	0.00895	0.93%
Ca 317.933†	327119.8	22.90	mg/L	0.198	114.5	mg/L	0.99	0.87%
Cd 228.802†	6687.3	0.2111	mg/L	0.00087	1.056	mg/L	0.0043	0.41%
Co 228.616†	8575.0	0.2370	mg/L	0.00051	1.185	mg/L	0.0025	0.21%
Cr 267.716†	1945.6	0.3102	mg/L	0.00314	1.551	mg/L	0.0157	1.01%
Cu 324.752†	72558.6	0.2882	mg/L	0.00022	1.441	mg/L	0.0011	0.08%
Fe 273.955†	116023.1	97.24	mg/L	0.979	486.2	mg/L	4.89	1.01%
K 766.490†	17939.6	9.048	mg/L	0.0993	45.24	mg/L	0.496	1.10%
Mg 279.077†	40745.8	27.26	mg/L	0.230	136.3	mg/L	1.15	0.84%
Mn 257.610†	153310.1	4.521	mg/L	0.0437	22.61	mg/L	0.218	0.97%
Mo 202.031†	45.0	0.00207	mg/L	0.000259	0.01034	mg/L	0.001297	12.54%
Na 589.592†	55834.7	4.318	mg/L	0.0441	21.59	mg/L	0.221	1.02%
Na 330.237†	117.0	4.546	mg/L	0.0856	22.73	mg/L	0.428	1.88%
Ni 231.604†	1200.7	0.2811	mg/L	0.00227	1.406	mg/L	0.0113	0.81%
Pb 220.353†	7341.7	0.9650	mg/L	0.00353	4.825	mg/L	0.0176	0.37%
Sb 206.836†	601.5	0.1885	mg/L	0.00296	0.9425	mg/L	0.01478	1.57%
Se 196.026†	1072.5	0.7447	mg/L	0.00358	3.723	mg/L	0.0179	0.48%
Si 288.158†	3019.6	1.445	mg/L	0.0129	7.224	mg/L	0.0646	0.89%
Sn 189.927†	-40.6	-0.00783	mg/L	0.000849	-0.03913	mg/L	0.004246	10.85%
Sr 421.552†	368553.6	0.3915	mg/L	0.00365	1.958	mg/L	0.0183	0.93%
Ti 334.903†	53924.5	2.684	mg/L	0.0248	13.42	mg/L	0.124	0.92%
Tl 190.801†	1847.4	0.7200	mg/L	0.00200	3.600	mg/L	0.0100	0.28%
V 292.402†	44415.0	0.3282	mg/L	0.00029	1.641	mg/L	0.0014	0.09%
Zn 206.200†	2846.1	0.6908	mg/L	0.00560	3.454	mg/L	0.0280	0.81%

Sequence No.: 5
Sample ID: VR31 APOST SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 327
Date Collected: 11/14/2012 1:19:19 PM
Data Type: Original

Nebulizer Parameters: VR31 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2562552.0	103.3	%	0.34				0.33%
ScR 361.383	330415.3	102.9	%	0.10				0.10%
Ag 328.068†	86341.4	0.4849	mg/L	0.00107	2.424	mg/L	0.0054	0.22%
Al 308.215†	189819.2	106.4	mg/L	0.72	532.2	mg/L	3.62	0.68%
As 188.979†	3560.9	2.003	mg/L	0.0102	10.01	mg/L	0.051	0.51%
B 249.677†	61.6	0.00668	mg/L	0.000980	0.03339	mg/L	0.004899	14.67%
Ba 233.527†	18127.2	3.753	mg/L	0.0076	18.77	mg/L	0.038	0.20%
Be 313.042†	321791.2	0.4917	mg/L	0.00264	2.459	mg/L	0.0132	0.54%
Ca 317.933†	424027.1	29.68	mg/L	0.208	148.4	mg/L	1.04	0.70%
Cd 228.802†	16961.3	0.5360	mg/L	0.00169	2.680	mg/L	0.0084	0.32%
Co 228.616†	19440.4	0.5452	mg/L	0.00244	2.726	mg/L	0.0122	0.45%
Cr 267.716†	3939.9	0.6269	mg/L	0.00102	3.134	mg/L	0.0051	0.16%
Cu 324.752†	153314.2	0.6051	mg/L	0.00047	3.025	mg/L	0.0023	0.08%
Fe 273.955†	118598.9	99.39	mg/L	0.629	497.0	mg/L	3.14	0.63%
K 766.490†	31465.8	15.87	mg/L	0.108	79.35	mg/L	0.542	0.68%
Mg 279.077†	49211.2	32.94	mg/L	0.182	164.7	mg/L	0.91	0.55%
Mn 257.610†	144247.8	4.254	mg/L	0.0249	21.27	mg/L	0.124	0.58%
Mo 202.031†	56.8	0.00258	mg/L	0.000415	0.01292	mg/L	0.002075	16.05%
Na 589.592†	132105.5	10.22	mg/L	0.070	51.08	mg/L	0.351	0.69%
Na 330.237†	297.0	10.89	mg/L	0.043	54.46	mg/L	0.216	0.40%
Ni 231.604†	2433.9	0.5695	mg/L	0.00037	2.848	mg/L	0.0019	0.07%
Pb 220.353†	16706.9	2.168	mg/L	0.0102	10.84	mg/L	0.051	0.47%
Sb 206.836†	25.0	0.00256	mg/L	0.000713	0.01281	mg/L	0.003566	27.83%
Se 196.026†	2833.3	1.967	mg/L	0.0053	9.837	mg/L	0.0265	0.27%
Si 288.158†	3709.4	1.776	mg/L	0.0056	8.880	mg/L	0.0278	0.31%
Sn 189.927†	-49.8	-0.00953	mg/L	0.001028	-0.04764	mg/L	0.005142	10.79%
Sr 421.552†	649857.4	0.6904	mg/L	0.00464	3.452	mg/L	0.0232	0.67%
Ti 334.903†	57727.4	2.873	mg/L	0.0197	14.36	mg/L	0.098	0.68%
Tl 190.801†	4816.8	1.862	mg/L	0.0108	9.311	mg/L	0.0539	0.58%
V 292.402†	85411.2	0.6350	mg/L	0.00023	3.175	mg/L	0.0012	0.04%
Zn 206.200†	4081.3	0.9907	mg/L	0.00221	4.953	mg/L	0.0110	0.22%

Sequence No.: 6
Sample ID: VR31 F SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 328
Date Collected: 11/14/2012 1:23:06 PM
Data Type: Original

Nebulizer Parameters: VR31 F SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2544219.3	102.5	%	0.32				0.31%
ScR 361.383	335867.9	104.6	%	0.82				0.79%
Ag 328.068†	-198.6	-0.00106	mg/L	0.000237	-0.00531	mg/L	0.001187	22.34%
Al 308.215†	152203.7	85.35	mg/L	0.526	426.7	mg/L	2.63	0.62%
As 188.979†	-94.8	0.03439	mg/L	0.002144	0.1720	mg/L	0.01072	6.23%
B 249.677†	18.5	0.00226	mg/L	0.000441	0.01129	mg/L	0.002206	19.53%
Ba 233.527†	5329.5	1.092	mg/L	0.0148	5.462	mg/L	0.0739	1.35%
Be 313.042†	1646.6	0.00244	mg/L	0.000071	0.01222	mg/L	0.000355	2.90%
Ca 317.933†	220570.7	15.44	mg/L	0.098	77.20	mg/L	0.489	0.63%
Cd 228.802†	115.2	0.00322	mg/L	0.000050	0.01610	mg/L	0.000251	1.56%
Co 228.616†	1547.5	0.03676	mg/L	0.000114	0.1838	mg/L	0.00057	0.31%
Cr 267.716†	963.2	0.1545	mg/L	0.00082	0.7724	mg/L	0.00409	0.53%
Cu 324.752†	22160.1	0.09041	mg/L	0.000552	0.4520	mg/L	0.00276	0.61%
Fe 273.955†	116089.3	97.29	mg/L	0.253	486.5	mg/L	1.26	0.26%
K 766.490†	13288.1	6.702	mg/L	0.0662	33.51	mg/L	0.331	0.99%
Mg 279.077†	37020.0	24.77	mg/L	0.179	123.8	mg/L	0.89	0.72%
Mn 257.610†	73721.1	2.174	mg/L	0.0076	10.87	mg/L	0.038	0.35%
Mo 202.031†	40.7	0.00193	mg/L	0.000030	0.00966	mg/L	0.000151	1.56%
Na 589.592†	12020.2	0.9295	mg/L	0.00707	4.648	mg/L	0.0353	0.76%
Na 330.237†	9.9	0.8884	mg/L	0.15472	4.442	mg/L	0.7736	17.42%
Ni 231.604†	402.1	0.09424	mg/L	0.001393	0.4712	mg/L	0.00696	1.48%
Pb 220.353†	879.8	0.1296	mg/L	0.00140	0.6481	mg/L	0.00702	1.08%
Sb 206.836†	6.8	0.00190	mg/L	0.002555	0.00952	mg/L	0.012776	134.16%
Se 196.026†	7.1	0.00480	mg/L	0.001416	0.02401	mg/L	0.007080	29.49%
Si 288.158†	4061.2	1.941	mg/L	0.0236	9.704	mg/L	0.1180	1.22%
Sn 189.927†	-32.5	-0.00660	mg/L	0.000608	-0.03299	mg/L	0.003041	9.22%
Sr 421.552†	158238.6	0.1681	mg/L	0.00115	0.8405	mg/L	0.00576	0.69%
Ti 334.903†	60797.9	3.026	mg/L	0.0165	15.13	mg/L	0.083	0.55%
Tl 190.801†	-24.8	-0.00006	mg/L	0.002462	-0.00032	mg/L	0.012311	>999.9%
V 292.402†	24218.2	0.1764	mg/L	0.00067	0.8822	mg/L	0.00333	0.38%
Zn 206.200†	1923.2	0.4668	mg/L	0.00648	2.334	mg/L	0.0324	1.39%

Sequence No.: 7
Sample ID: VR31 G SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 329
Date Collected: 11/14/2012 1:27:06 PM
Data Type: Original

Nebulizer Parameters: VR31 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2569651.0	103.6	%	1.05				1.01%
ScR 361.383	334861.0	104.3	%	0.07				0.07%
Ag 328.068†	-106.0	-0.00054	mg/L	0.000141	-0.00272	mg/L	0.000707	26.04%
Al 308.215†	191973.4	107.6	mg/L	0.33	538.2	mg/L	1.63	0.30%
As 188.979†	-104.5	0.04348	mg/L	0.000521	0.2174	mg/L	0.00261	1.20%
B 249.677†	37.6	0.00465	mg/L	0.000327	0.02326	mg/L	0.001636	7.03%
Ba 233.527†	6289.3	1.290	mg/L	0.0066	6.450	mg/L	0.0328	0.51%
Be 313.042†	2506.2	0.00375	mg/L	0.000037	0.01876	mg/L	0.000183	0.97%
Ca 317.933†	264283.3	18.50	mg/L	0.101	92.51	mg/L	0.503	0.54%
Cd 228.802†	227.7	0.00680	mg/L	0.000117	0.03400	mg/L	0.000585	1.72%
Co 228.616†	2019.9	0.04902	mg/L	0.000524	0.2451	mg/L	0.00262	1.07%
Cr 267.716†	990.1	0.1589	mg/L	0.00111	0.7945	mg/L	0.00555	0.70%
Cu 324.752†	42102.5	0.1691	mg/L	0.00140	0.8455	mg/L	0.00699	0.83%
Fe 273.955†	130874.3	109.7	mg/L	0.69	548.4	mg/L	3.46	0.63%
K 766.490†	16099.6	8.120	mg/L	0.0293	40.60	mg/L	0.147	0.36%
Mg 279.077†	36547.6	24.44	mg/L	0.080	122.2	mg/L	0.40	0.33%
Mn 257.610†	200605.5	5.916	mg/L	0.0344	29.58	mg/L	0.172	0.58%
Mo 202.031†	64.9	0.00315	mg/L	0.000167	0.01577	mg/L	0.000834	5.29%
Na 589.592†	13222.7	1.023	mg/L	0.0005	5.113	mg/L	0.0023	0.04%
Na 330.237†	9.6	0.9160	mg/L	0.05216	4.580	mg/L	0.2608	5.69%
Ni 231.604†	507.7	0.1190	mg/L	0.00170	0.5949	mg/L	0.00852	1.43%
Pb 220.353†	674.7	0.1080	mg/L	0.00065	0.5400	mg/L	0.00324	0.60%
Sb 206.836†	4.2	0.00120	mg/L	0.000978	0.00600	mg/L	0.004890	81.45%
Se 196.026†	17.5	0.01199	mg/L	0.001451	0.05997	mg/L	0.007257	12.10%
Si 288.158†	3914.8	1.871	mg/L	0.0230	9.355	mg/L	0.1150	1.23%
Sn 189.927†	-42.4	-0.00886	mg/L	0.000670	-0.04430	mg/L	0.003351	7.56%
Sr 421.552†	212974.2	0.2263	mg/L	0.00067	1.131	mg/L	0.0034	0.30%
Ti 334.903†	70985.5	3.534	mg/L	0.0148	17.67	mg/L	0.074	0.42%
Tl 190.801†	-31.4	-0.00137	mg/L	0.000602	-0.00685	mg/L	0.003010	43.91%
V 292.402†	23892.3	0.1739	mg/L	0.00170	0.8694	mg/L	0.00851	0.98%
Zn 206.200†	2865.7	0.6955	mg/L	0.00591	3.478	mg/L	0.0295	0.85%

Sequence No.: 8
Sample ID: VR31 K SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 330
Date Collected: 11/14/2012 1:31:06 PM
Data Type: Original

Nebulizer Parameters: VR31 K SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR31 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2528795.6	101.9	%	0.13				0.13%
ScR 361.383	334695.8	104.2	%	0.54				0.52%
Ag 328.068†	-93.1	-0.00048	mg/L	0.000166	-0.00240	mg/L	0.000830	34.60%
Al 308.215†	111003.3	62.24	mg/L	0.228	311.2	mg/L	1.14	0.37%
As 188.979†	15.4	0.1018	mg/L	0.00329	0.5091	mg/L	0.01646	3.23%
B 249.677†	44.1	0.00548	mg/L	0.000500	0.02739	mg/L	0.002498	9.12%
Ba 233.527†	4197.5	0.8569	mg/L	0.00491	4.285	mg/L	0.0246	0.57%
Be 313.042†	1418.9	0.00210	mg/L	0.000023	0.01050	mg/L	0.000116	1.10%
Ca 317.933†	357748.7	25.04	mg/L	0.071	125.2	mg/L	0.36	0.28%
Cd 228.802†	1944.3	0.06207	mg/L	0.000421	0.3103	mg/L	0.00211	0.68%
Co 228.616†	1876.6	0.04554	mg/L	0.000332	0.2277	mg/L	0.00166	0.73%
Cr 267.716†	1503.2	0.2399	mg/L	0.00167	1.200	mg/L	0.0083	0.69%
Cu 324.752†	34281.8	0.1379	mg/L	0.00079	0.6894	mg/L	0.00393	0.57%
Fe 273.955†	116290.4	97.46	mg/L	0.304	487.3	mg/L	1.52	0.31%
K 766.490†	28231.3	14.24	mg/L	0.084	71.19	mg/L	0.420	0.59%
Mg 279.077†	41406.5	27.71	mg/L	0.091	138.5	mg/L	0.45	0.33%
Mn 257.610†	100354.6	2.960	mg/L	0.0091	14.80	mg/L	0.046	0.31%
Mo 202.031†	55.8	0.00260	mg/L	0.000210	0.01302	mg/L	0.001052	8.08%
Na 589.592†	9385.6	0.7258	mg/L	0.00349	3.629	mg/L	0.0175	0.48%
Na 330.237†	14.7	0.5789	mg/L	0.20485	2.895	mg/L	1.0243	35.39%
Ni 231.604†	453.9	0.1064	mg/L	0.00066	0.5318	mg/L	0.00332	0.63%
Pb 220.353†	11957.1	1.548	mg/L	0.0073	7.738	mg/L	0.0364	0.47%
Sb 206.836†	34.5	0.00945	mg/L	0.001742	0.04724	mg/L	0.008712	18.44%
Se 196.026†	8.0	0.00545	mg/L	0.002754	0.02724	mg/L	0.013771	50.55%
Si 288.158†	1606.5	0.7701	mg/L	0.00514	3.851	mg/L	0.0257	0.67%
Sn 189.927†	-21.4	-0.00224	mg/L	0.000874	-0.01120	mg/L	0.004368	38.99%
Sr 421.552†	217526.9	0.2311	mg/L	0.00063	1.155	mg/L	0.0031	0.27%
Ti 334.903†	66856.8	3.328	mg/L	0.0100	16.64	mg/L	0.050	0.30%
Tl 190.801†	-16.9	0.00302	mg/L	0.000855	0.01512	mg/L	0.004276	28.28%
V 292.402†	19894.7	0.1445	mg/L	0.00016	0.7226	mg/L	0.00082	0.11%
Zn 206.200†	8771.0	2.129	mg/L	0.0151	10.64	mg/L	0.075	0.71%

Sequence No.: 9
Sample ID: VR31 L SWC
Analyst: BA
Dilution: 5.000000X

Autosampler Location: 331
Date Collected: 11/14/2012 1:35:06 PM
Data Type: Original

Nebulizer Parameters: VR31 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR31 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2560111.1	103.2	%	0.41				0.40%
ScR 361.383	335241.4	104.4	%	0.43				0.41%
Ag 328.068†	-189.4	-0.00102	mg/L	0.000200	-0.00512	mg/L	0.000998	19.48%
Al 308.215†	151685.3	85.06	mg/L	0.443	425.3	mg/L	2.22	0.52%
As 188.979†	-4.8	0.07073	mg/L	0.000788	0.3536	mg/L	0.00394	1.11%
B 249.677†	39.2	0.00484	mg/L	0.000437	0.02419	mg/L	0.002186	9.04%
Ba 233.527†	4133.0	0.8405	mg/L	0.00506	4.203	mg/L	0.0253	0.60%
Be 313.042†	2203.4	0.00331	mg/L	0.000038	0.01655	mg/L	0.000188	1.14%
Ca 317.933†	301211.2	21.09	mg/L	0.173	105.4	mg/L	0.87	0.82%
Cd 228.802†	448.2	0.01354	mg/L	0.000168	0.06770	mg/L	0.000839	1.24%
Co 228.616†	2308.2	0.05895	mg/L	0.000310	0.2948	mg/L	0.00155	0.53%
Cr 267.716†	784.1	0.1266	mg/L	0.00066	0.6330	mg/L	0.00329	0.52%
Cu 324.752†	33803.0	0.1370	mg/L	0.00039	0.6850	mg/L	0.00194	0.28%
Fe 273.955†	138184.4	115.8	mg/L	1.23	579.0	mg/L	6.13	1.06%
K 766.490†	21809.3	11.00	mg/L	0.055	55.00	mg/L	0.277	0.50%
Mg 279.077†	34486.5	23.06	mg/L	0.183	115.3	mg/L	0.91	0.79%
Mn 257.610†	152504.7	4.498	mg/L	0.0340	22.49	mg/L	0.170	0.76%
Mo 202.031†	94.2	0.00464	mg/L	0.000322	0.02320	mg/L	0.001612	6.95%
Na 589.592†	4875.6	0.3770	mg/L	0.00247	1.885	mg/L	0.0124	0.66%
Na 330.237†	1.6	0.4043	mg/L	0.19324	2.021	mg/L	0.9662	47.80%
Ni 231.604†	556.5	0.1304	mg/L	0.00099	0.6521	mg/L	0.00497	0.76%
Pb 220.353†	3215.8	0.4289	mg/L	0.00132	2.144	mg/L	0.0066	0.31%
Sb 206.836†	12.9	0.00386	mg/L	0.001025	0.01932	mg/L	0.005125	26.53%
Se 196.026†	11.8	0.00807	mg/L	0.004974	0.04033	mg/L	0.024870	61.66%
Si 288.158†	2038.9	0.9757	mg/L	0.00798	4.879	mg/L	0.0399	0.82%
Sn 189.927†	-39.2	-0.00778	mg/L	0.002735	-0.03888	mg/L	0.013677	35.18%
Sr 421.552†	189063.4	0.2008	mg/L	0.00119	1.004	mg/L	0.0059	0.59%
Ti 334.903†	52395.0	2.608	mg/L	0.0136	13.04	mg/L	0.068	0.52%
Tl 190.801†	-28.6	0.00048	mg/L	0.002763	0.00241	mg/L	0.013813	573.80%
V 292.402†	17833.6	0.1287	mg/L	0.00061	0.6433	mg/L	0.00303	0.47%
Zn 206.200†	3095.6	0.7513	mg/L	0.00699	3.757	mg/L	0.0350	0.93%

Sequence No.: 10
Sample ID: CV 4
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/14/2012 1:39:06 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2538709.5	102.3	%	0.53				0.52%
ScR 361.383	325987.0	101.5	%	1.23				1.21%
Ag 328.068†	176687.3	0.9921	mg/L	0.00252	0.9921	mg/L	0.00252	0.25%
Al 308.215†	3649.8	2.012	mg/L	0.0294	2.012	mg/L	0.0294	1.46%
As 188.979†	3602.8	1.971	mg/L	0.0148	1.971	mg/L	0.0148	0.75%
B 249.677†	7431.4	0.9409	mg/L	0.01149	0.9409	mg/L	0.01149	1.22%
Ba 233.527†	4895.0	1.018	mg/L	0.0094	1.018	mg/L	0.0094	0.92%
Be 313.042†	625087.5	0.9553	mg/L	0.01731	0.9553	mg/L	0.01731	1.81%
Ca 317.933†	28063.1	1.965	mg/L	0.0335	1.965	mg/L	0.0335	1.71%
Cd 228.802†	32088.3	1.027	mg/L	0.0050	1.027	mg/L	0.0050	0.49%
Co 228.616†	35175.3	0.9974	mg/L	0.00449	0.9974	mg/L	0.00449	0.45%
Cr 267.716†	6444.3	1.025	mg/L	0.0128	1.025	mg/L	0.0128	1.25%
Cu 324.752†	253047.8	0.9923	mg/L	0.00188	0.9923	mg/L	0.00188	0.19%
Fe 273.955†	2526.5	2.110	mg/L	0.0355	2.110	mg/L	0.0355	1.68%
K 766.490†	39083.2	19.71	mg/L	0.429	19.71	mg/L	0.429	2.17%
Mg 279.077†	3025.5	2.035	mg/L	0.0242	2.035	mg/L	0.0242	1.19%
Mn 257.610†	33884.5	0.9996	mg/L	0.01868	0.9996	mg/L	0.01868	1.87%
Mo 202.031†	19473.6	1.008	mg/L	0.0043	1.008	mg/L	0.0043	0.42%
Na 589.592†	620538.0	47.99	mg/L	0.909	47.99	mg/L	0.909	1.89%
Na 330.237†	1449.2	51.46	mg/L	0.799	51.46	mg/L	0.799	1.55%
Ni 231.604†	4056.3	0.9509	mg/L	0.01204	0.9509	mg/L	0.01204	1.27%
Pb 220.353†	15137.0	1.946	mg/L	0.0071	1.946	mg/L	0.0071	0.37%
Sb 206.836†	6741.2	2.135	mg/L	0.0087	2.135	mg/L	0.0087	0.41%
Se 196.026†	2787.9	1.935	mg/L	0.0101	1.935	mg/L	0.0101	0.52%
Si 288.158†	4405.5	2.101	mg/L	0.0268	2.101	mg/L	0.0268	1.27%
Sn 189.927†	3771.8	1.039	mg/L	0.0046	1.039	mg/L	0.0046	0.44%
Sr 421.552†	876218.7	0.9308	mg/L	0.01721	0.9308	mg/L	0.01721	1.85%
Ti 334.903†	20835.8	1.036	mg/L	0.0183	1.036	mg/L	0.0183	1.77%
Tl 190.801†	5001.0	1.920	mg/L	0.0079	1.920	mg/L	0.0079	0.41%
V 292.402†	134718.6	1.009	mg/L	0.0034	1.009	mg/L	0.0034	0.34%
Zn 206.200†	4101.5	0.9952	mg/L	0.01220	0.9952	mg/L	0.01220	1.23%

Sequence No.: 11
Sample ID: CB 4
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/14/2012 1:44:11 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2502572.1	100.9	%	0.66				0.66%
ScR 361.383	328781.1	102.4	%	1.01				0.98%
Ag 328.068†	10.4	0.00006	mg/L	0.000315	0.00006	mg/L	0.000315	538.71%
Al 308.215†	6.2	0.00349	mg/L	0.007525	0.00349	mg/L	0.007525	215.65%
As 188.979†	-3.0	-0.00159	mg/L	0.001034	-0.00159	mg/L	0.001034	65.13%
B 249.677†	5.0	0.00063	mg/L	0.000714	0.00063	mg/L	0.000714	112.46%
Ba 233.527†	-0.7	-0.00015	mg/L	0.000524	-0.00015	mg/L	0.000524	339.69%
Be 313.042†	150.9	0.00023	mg/L	0.000050	0.00023	mg/L	0.000050	21.84%
Ca 317.933†	-45.4	-0.00318	mg/L	0.001050	-0.00318	mg/L	0.001050	33.02%
Cd 228.802†	-3.6	-0.00010	mg/L	0.000078	-0.00010	mg/L	0.000078	74.91%
Co 228.616†	-2.0	-0.00006	mg/L	0.000200	-0.00006	mg/L	0.000200	348.45%
Cr 267.716†	-1.3	-0.00020	mg/L	0.000655	-0.00020	mg/L	0.000655	322.31%
Cu 324.752†	-122.7	-0.00048	mg/L	0.000054	-0.00048	mg/L	0.000054	11.20%
Fe 273.955†	0.3	0.00024	mg/L	0.001798	0.00024	mg/L	0.001798	743.18%
K 766.490†	-22.3	-0.01124	mg/L	0.005026	-0.01124	mg/L	0.005026	44.73%
Mg 279.077†	4.3	0.00286	mg/L	0.008466	0.00286	mg/L	0.008466	296.46%
Mn 257.610†	14.0	0.00041	mg/L	0.000067	0.00041	mg/L	0.000067	16.26%
Mo 202.031†	9.7	0.00050	mg/L	0.000131	0.00050	mg/L	0.000131	26.06%
Na 589.592†	-43.7	-0.00338	mg/L	0.000390	-0.00338	mg/L	0.000390	11.55%
Na 330.237†	-2.1	-0.07482	mg/L	0.111902	-0.07482	mg/L	0.111902	149.56%
Ni 231.604†	1.4	0.00032	mg/L	0.001410	0.00032	mg/L	0.001410	440.89%
Pb 220.353†	-2.0	-0.00025	mg/L	0.000257	-0.00025	mg/L	0.000257	101.88%
Sb 206.836†	7.1	0.00225	mg/L	0.000320	0.00225	mg/L	0.000320	14.26%
Se 196.026†	2.3	0.00157	mg/L	0.004227	0.00157	mg/L	0.004227	268.90%
Si 288.158†	-1.2	-0.00055	mg/L	0.001481	-0.00055	mg/L	0.001481	269.01%
Sn 189.927†	0.4	0.00011	mg/L	0.000890	0.00011	mg/L	0.000890	810.05%
Sr 421.552†	159.5	0.00017	mg/L	0.000020	0.00017	mg/L	0.000020	11.54%
Ti 334.903†	19.8	0.00098	mg/L	0.000947	0.00098	mg/L	0.000947	96.18%
Tl 190.801†	-2.9	-0.00112	mg/L	0.000662	-0.00112	mg/L	0.000662	58.99%
V 292.402†	-0.8	-0.00001	mg/L	0.000114	-0.00001	mg/L	0.000114	>999.9%
Zn 206.200†	0.8	0.00019	mg/L	0.000343	0.00019	mg/L	0.000343	184.77%

Sequence No.: 12
Sample ID: CRI
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 332
Date Collected: 11/14/2012 1:48:26 PM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2523488.7	101.7	%	1.10				1.08%
ScR 361.383	329310.4	102.6	%	0.60				0.58%
Ag 328.068†	552.4	0.00310	mg/L	0.000152	0.00310	mg/L	0.000152	4.90%
Al 308.215†	89.6	0.05011	mg/L	0.005828	0.05011	mg/L	0.005828	11.63%
As 188.979†	88.1	0.04770	mg/L	0.001532	0.04770	mg/L	0.001532	3.21%
B 249.677†	157.5	0.01995	mg/L	0.001182	0.01995	mg/L	0.001182	5.92%
Ba 233.527†	13.7	0.00284	mg/L	0.000423	0.00284	mg/L	0.000423	14.88%
Be 313.042†	667.7	0.00102	mg/L	0.000029	0.00102	mg/L	0.000029	2.83%
Ca 317.933†	639.8	0.04479	mg/L	0.000866	0.04479	mg/L	0.000866	1.93%
Cd 228.802†	66.9	0.00186	mg/L	0.000154	0.00186	mg/L	0.000154	8.28%
Co 228.616†	129.4	0.00366	mg/L	0.000123	0.00366	mg/L	0.000123	3.37%
Cr 267.716†	34.4	0.00547	mg/L	0.000720	0.00547	mg/L	0.000720	13.16%
Cu 324.752†	366.2	0.00144	mg/L	0.000186	0.00144	mg/L	0.000186	12.98%
Fe 273.955†	58.1	0.04867	mg/L	0.002899	0.04867	mg/L	0.002899	5.96%
K 766.490†	950.2	0.4793	mg/L	0.00325	0.4793	mg/L	0.00325	0.68%
Mg 279.077†	75.6	0.05072	mg/L	0.002935	0.05072	mg/L	0.002935	5.79%
Mn 257.610†	44.3	0.00131	mg/L	0.000051	0.00131	mg/L	0.000051	3.91%
Mo 202.031†	95.2	0.00493	mg/L	0.000108	0.00493	mg/L	0.000108	2.19%
Na 589.592†	5843.6	0.4519	mg/L	0.00171	0.4519	mg/L	0.00171	0.38%
Na 330.237†	22.2	0.7888	mg/L	0.32533	0.7888	mg/L	0.32533	41.25%
Ni 231.604†	41.0	0.00961	mg/L	0.000739	0.00961	mg/L	0.000739	7.69%
Pb 220.353†	156.8	0.02017	mg/L	0.000773	0.02017	mg/L	0.000773	3.83%
Sb 206.836†	161.3	0.05115	mg/L	0.001635	0.05115	mg/L	0.001635	3.20%
Se 196.026†	68.4	0.04748	mg/L	0.003820	0.04748	mg/L	0.003820	8.04%
Si 288.158†	138.2	0.06588	mg/L	0.002825	0.06588	mg/L	0.002825	4.29%
Sn 189.927†	36.6	0.01010	mg/L	0.000622	0.01010	mg/L	0.000622	6.15%
Sr 421.552†	936.4	0.00099	mg/L	0.000049	0.00099	mg/L	0.000049	4.91%
Ti 334.903†	103.4	0.00514	mg/L	0.000712	0.00514	mg/L	0.000712	13.85%
Tl 190.801†	120.1	0.04628	mg/L	0.001111	0.04628	mg/L	0.001111	2.40%
V 292.402†	382.0	0.00287	mg/L	0.000079	0.00287	mg/L	0.000079	2.76%
Zn 206.200†	39.0	0.00947	mg/L	0.000422	0.00947	mg/L	0.000422	4.45%

Sequence No.: 13
Sample ID: ICSA
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 333
Date Collected: 11/14/2012 1:52:42 PM
Data Type: Original

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2468711.4	99.49	%	0.210				0.21%
ScR 361.383	319432.4	99.48	%	0.347				0.35%
Ag 328.068†	-193.6	-0.00108	mg/L	0.000202	-0.00108	mg/L	0.000202	18.63%
Al 308.215†	353636.0	198.3	mg/L	0.80	198.3	mg/L	0.80	0.40%
As 188.979†	35.9	0.01375	mg/L	0.000814	0.01375	mg/L	0.000814	5.92%
B 249.677†	-35.3	-0.00447	mg/L	0.001041	-0.00447	mg/L	0.001041	23.26%
Ba 233.527†	138.4	-0.00407	mg/L	0.000514	-0.00407	mg/L	0.000514	12.63%
Be 313.042†	113.2	0.00017	mg/L	0.000010	0.00017	mg/L	0.000010	5.61%
Ca 317.933†	1435762.1	100.5	mg/L	0.68	100.5	mg/L	0.68	0.68%
Cd 228.802†	54.7	-0.00027	mg/L	0.000093	-0.00027	mg/L	0.000093	34.64%
Co 228.616†	73.4	-0.00054	mg/L	0.000191	-0.00054	mg/L	0.000191	35.27%
Cr 267.716†	6.2	-0.00110	mg/L	0.001174	-0.00110	mg/L	0.001174	106.92%
Cu 324.752†	-2124.0	-0.00034	mg/L	0.000003	-0.00034	mg/L	0.000003	0.87%
Fe 273.955†	239490.3	200.7	mg/L	1.38	200.7	mg/L	1.38	0.69%
K 766.490†	-3.2	-0.00164	mg/L	0.004163	-0.00164	mg/L	0.004163	254.40%
Mg 279.077†	156258.0	104.6	mg/L	1.37	104.6	mg/L	1.37	1.31%
Mn 257.610†	15.4	0.00046	mg/L	0.000047	0.00046	mg/L	0.000047	10.27%
Mo 202.031†	43.1	0.00115	mg/L	0.000325	0.00115	mg/L	0.000325	28.30%
Na 589.592†	48.4	0.00374	mg/L	0.003358	0.00374	mg/L	0.003358	89.80%
Na 330.237†	-13.4	-0.4749	mg/L	0.17369	-0.4749	mg/L	0.17369	36.58%
Ni 231.604†	-6.3	-0.00147	mg/L	0.001293	-0.00147	mg/L	0.001293	87.94%
Pb 220.353†	-310.1	-0.00064	mg/L	0.001588	-0.00064	mg/L	0.001588	246.91%
Sb 206.836†	14.3	0.00433	mg/L	0.000308	0.00433	mg/L	0.000308	7.10%
Se 196.026†	19.9	0.01385	mg/L	0.002275	0.01385	mg/L	0.002275	16.43%
Si 288.158†	-32.7	-0.00289	mg/L	0.001419	-0.00289	mg/L	0.001419	49.06%
Sn 189.927†	-91.6	-0.01275	mg/L	0.002487	-0.01275	mg/L	0.002487	19.51%
Sr 421.552†	3589.1	0.00381	mg/L	0.000025	0.00381	mg/L	0.000025	0.67%
Ti 334.903†	144.7	0.00241	mg/L	0.000255	0.00241	mg/L	0.000255	10.61%
Tl 190.801†	-57.9	-0.00091	mg/L	0.002073	-0.00091	mg/L	0.002073	228.71%
V 292.402†	1100.0	0.00119	mg/L	0.000218	0.00119	mg/L	0.000218	18.35%
Zn 206.200†	18.4	0.00447	mg/L	0.000596	0.00447	mg/L	0.000596	13.33%

Sequence No.: 14
Sample ID: ICSAB
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 334
Date Collected: 11/14/2012 1:56:58 PM
Data Type: Original

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2494764.8	100.5	%	0.33				0.32%
ScR 361.383	323197.9	100.7	%	0.53				0.52%
Ag 328.068†	173315.9	0.9732	mg/L	0.00097	0.9732	mg/L	0.00097	0.10%
Al 308.215†	350248.4	196.4	mg/L	2.01	196.4	mg/L	2.01	1.02%
As 188.979†	1847.1	0.9910	mg/L	0.00150	0.9910	mg/L	0.00150	0.15%
B 249.677†	-18.3	-0.00436	mg/L	0.000842	-0.00436	mg/L	0.000842	19.33%
Ba 233.527†	5034.6	1.014	mg/L	0.0110	1.014	mg/L	0.0110	1.09%
Be 313.042†	629255.7	0.9617	mg/L	0.00965	0.9617	mg/L	0.00965	1.00%
Ca 317.933†	1440432.5	100.8	mg/L	1.16	100.8	mg/L	1.16	1.15%
Cd 228.802†	31679.4	1.018	mg/L	0.0023	1.018	mg/L	0.0023	0.23%
Co 228.616†	34868.2	0.9880	mg/L	0.00162	0.9880	mg/L	0.00162	0.16%
Cr 267.716†	6483.8	1.029	mg/L	0.0095	1.029	mg/L	0.0095	0.93%
Cu 324.752†	258775.0	1.023	mg/L	0.0003	1.023	mg/L	0.0003	0.03%
Fe 273.955†	238862.3	200.2	mg/L	2.50	200.2	mg/L	2.50	1.25%
K 766.490†	-103.3	-0.05211	mg/L	0.009720	-0.05211	mg/L	0.009720	18.65%
Mg 279.077†	149195.0	99.92	mg/L	1.278	99.92	mg/L	1.278	1.28%
Mn 257.610†	33533.4	0.9891	mg/L	0.01273	0.9891	mg/L	0.01273	1.29%
Mo 202.031†	41.2	0.00099	mg/L	0.000458	0.00099	mg/L	0.000458	46.30%
Na 589.592†	199.7	0.01544	mg/L	0.001579	0.01544	mg/L	0.001579	10.22%
Na 330.237†	0.2	-0.3009	mg/L	0.10155	-0.3009	mg/L	0.10155	33.75%
Ni 231.604†	3978.3	0.9324	mg/L	0.01056	0.9324	mg/L	0.01056	1.13%
Pb 220.353†	7234.0	0.9689	mg/L	0.00210	0.9689	mg/L	0.00210	0.22%
Sb 206.836†	3272.5	1.026	mg/L	0.0029	1.026	mg/L	0.0029	0.29%
Se 196.026†	1420.1	0.9853	mg/L	0.01144	0.9853	mg/L	0.01144	1.16%
Si 288.158†	-30.3	0.00134	mg/L	0.000659	0.00134	mg/L	0.000659	49.30%
Sn 189.927†	-87.8	-0.01116	mg/L	0.001126	-0.01116	mg/L	0.001126	10.09%
Sr 421.552†	3576.0	0.00380	mg/L	0.000053	0.00380	mg/L	0.000053	1.40%
Ti 334.903†	144.3	0.00216	mg/L	0.000246	0.00216	mg/L	0.000246	11.37%
Tl 190.801†	2324.1	0.9082	mg/L	0.00291	0.9082	mg/L	0.00291	0.32%
V 292.402†	129138.5	0.9604	mg/L	0.00065	0.9604	mg/L	0.00065	0.07%
Zn 206.200†	3872.5	0.9399	mg/L	0.00962	0.9399	mg/L	0.00962	1.02%

Sequence No.: 15
Sample ID: CV 5
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/14/2012 2:00:46 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2529891.3	102.0	%	0.70				0.68%
ScR 361.383	324786.1	101.2	%	1.33				1.32%
Ag 328.068†	169451.3	0.9515	mg/L	0.00224	0.9515	mg/L	0.00224	0.24%
Al 308.215†	3743.7	2.065	mg/L	0.0258	2.065	mg/L	0.0258	1.25%
As 188.979†	3572.9	1.955	mg/L	0.0114	1.955	mg/L	0.0114	0.58%
B 249.677†	7497.7	0.9493	mg/L	0.01422	0.9493	mg/L	0.01422	1.50%
Ba 233.527†	4934.9	1.026	mg/L	0.0139	1.026	mg/L	0.0139	1.36%
Be 313.042†	622302.0	0.9510	mg/L	0.01567	0.9510	mg/L	0.01567	1.65%
Ca 317.933†	28541.9	1.998	mg/L	0.0313	1.998	mg/L	0.0313	1.57%
Cd 228.802†	31698.8	1.014	mg/L	0.0028	1.014	mg/L	0.0028	0.28%
Co 228.616†	35906.9	1.018	mg/L	0.0047	1.018	mg/L	0.0047	0.46%
Cr 267.716†	6486.0	1.031	mg/L	0.0134	1.031	mg/L	0.0134	1.30%
Cu 324.752†	252705.1	0.9910	mg/L	0.00043	0.9910	mg/L	0.00043	0.04%
Fe 273.955†	2578.6	2.154	mg/L	0.0164	2.154	mg/L	0.0164	0.76%
K 766.490†	39416.2	19.88	mg/L	0.214	19.88	mg/L	0.214	1.08%
Mg 279.077†	3100.4	2.086	mg/L	0.0231	2.086	mg/L	0.0231	1.11%
Mn 257.610†	34047.2	1.004	mg/L	0.0162	1.004	mg/L	0.0162	1.61%
Mo 202.031†	19887.1	1.030	mg/L	0.0059	1.030	mg/L	0.0059	0.57%
Na 589.592†	625608.2	48.38	mg/L	0.710	48.38	mg/L	0.710	1.47%
Na 330.237†	1457.6	51.75	mg/L	0.705	51.75	mg/L	0.705	1.36%
Ni 231.604†	4091.4	0.9591	mg/L	0.01198	0.9591	mg/L	0.01198	1.25%
Pb 220.353†	15501.3	1.993	mg/L	0.0084	1.993	mg/L	0.0084	0.42%
Sb 206.836†	6688.7	2.118	mg/L	0.0109	2.118	mg/L	0.0109	0.51%
Se 196.026†	2770.3	1.923	mg/L	0.0145	1.923	mg/L	0.0145	0.76%
Si 288.158†	4429.7	2.113	mg/L	0.0360	2.113	mg/L	0.0360	1.70%
Sn 189.927†	3739.7	1.030	mg/L	0.0065	1.030	mg/L	0.0065	0.64%
Sr 421.552†	885155.5	0.9403	mg/L	0.01381	0.9403	mg/L	0.01381	1.47%
Ti 334.903†	20875.0	1.038	mg/L	0.0156	1.038	mg/L	0.0156	1.50%
Tl 190.801†	4986.9	1.914	mg/L	0.0103	1.914	mg/L	0.0103	0.54%
V 292.402†	130816.3	0.9798	mg/L	0.00121	0.9798	mg/L	0.00121	0.12%
Zn 206.200†	4139.4	1.004	mg/L	0.0114	1.004	mg/L	0.0114	1.13%

Sequence No.: 16
Sample ID: CB 5
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/14/2012 2:05:39 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2526012.7	101.8	%	0.24				0.24%
ScR 361.383	327707.0	102.1	%	0.37				0.36%
Ag 328.068†	-1.1	-0.00001	mg/L	0.000207	-0.00001	mg/L	0.000207	>999.9%
Al 308.215†	12.9	0.00720	mg/L	0.005497	0.00720	mg/L	0.005497	76.30%
As 188.979†	-5.0	-0.00268	mg/L	0.000664	-0.00268	mg/L	0.000664	24.75%
B 249.677†	14.1	0.00178	mg/L	0.000682	0.00178	mg/L	0.000682	38.26%
Ba 233.527†	1.4	0.00029	mg/L	0.000879	0.00029	mg/L	0.000879	301.18%
Be 313.042†	141.0	0.00022	mg/L	0.000040	0.00022	mg/L	0.000040	18.36%
Ca 317.933†	-5.0	-0.00035	mg/L	0.001458	-0.00035	mg/L	0.001458	416.23%
Cd 228.802†	-5.5	-0.00016	mg/L	0.000063	-0.00016	mg/L	0.000063	39.28%
Co 228.616†	-0.2	-0.00001	mg/L	0.000022	-0.00001	mg/L	0.000022	373.96%
Cr 267.716†	-2.9	-0.00046	mg/L	0.000522	-0.00046	mg/L	0.000522	112.72%
Cu 324.752†	-103.7	-0.00041	mg/L	0.000050	-0.00041	mg/L	0.000050	12.26%
Fe 273.955†	2.8	0.00232	mg/L	0.001723	0.00232	mg/L	0.001723	74.27%
K 766.490†	-8.9	-0.00451	mg/L	0.006128	-0.00451	mg/L	0.006128	135.90%
Mg 279.077†	0.4	0.00027	mg/L	0.003286	0.00027	mg/L	0.003286	>999.9%
Mn 257.610†	7.7	0.00023	mg/L	0.000098	0.00023	mg/L	0.000098	43.46%
Mo 202.031†	9.1	0.00047	mg/L	0.000135	0.00047	mg/L	0.000135	28.72%
Na 589.592†	-50.5	-0.00390	mg/L	0.005586	-0.00390	mg/L	0.005586	143.06%
Na 330.237†	-3.5	-0.1245	mg/L	0.16576	-0.1245	mg/L	0.16576	133.16%
Ni 231.604†	-2.6	-0.00062	mg/L	0.000662	-0.00062	mg/L	0.000662	107.38%
Pb 220.353†	0.4	0.00005	mg/L	0.000717	0.00005	mg/L	0.000717	>999.9%
Sb 206.836†	5.9	0.00186	mg/L	0.001921	0.00186	mg/L	0.001921	103.51%
Se 196.026†	2.2	0.00152	mg/L	0.000776	0.00152	mg/L	0.000776	51.08%
Si 288.158†	6.8	0.00323	mg/L	0.001048	0.00323	mg/L	0.001048	32.49%
Sn 189.927†	-1.8	-0.00050	mg/L	0.000668	-0.00050	mg/L	0.000668	133.11%
Sr 421.552†	106.3	0.00011	mg/L	0.000013	0.00011	mg/L	0.000013	11.42%
Ti 334.903†	10.2	0.00051	mg/L	0.000301	0.00051	mg/L	0.000301	59.07%
Tl 190.801†	1.0	0.00039	mg/L	0.000441	0.00039	mg/L	0.000441	113.70%
V 292.402†	-32.4	-0.00024	mg/L	0.000105	-0.00024	mg/L	0.000105	43.22%
Zn 206.200†	2.5	0.00061	mg/L	0.000728	0.00061	mg/L	0.000728	118.72%

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-7-12

Page: 1 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD 0.0	3MM	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			7.26	Beg in CLP %R=91 ✓
ICB			-0.01	✓
CCV1			3.49	%R=92 ✓
CCB1			-0.00	✓
CRA			0.10	✓
VSIB MB1			0.01	✓
" MB1SPK			1.90	%R=95 ✓
" A			1.08	
" ADUP			1.05	RPD=2.81 ✓
" ASPK			2.04	%R=96 ✓
" B				
" C				
" D				
" E				
CCV2			3.65	%R=91 ✓
CCB2			0.00	✓
VSIB F				DEL CV OUT
" G				
" H				
" I				
" J				
" K				
" L	↓	↓		↓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM Date: 11-17-12

Instrument: CETAC Page: 2 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
VR37	MB1	5mm	1X	0.00	DEL CV out	√
"	MB1SPK			2.04	%R=102	√
"	A			0.19		
CCV3				1.76	%R=44 LOW	X
CCV4				3.63	%R=91	√
CCB3				0.00		√
VS18	F					
"	G					
"	H					
"	I					
"	J					
"	K					
"	L					
VR37	MB1			0.01		√
"	MB1SPK			1.74	%R=87	√
"	A			0.16		
CCV5				3.59	%R=90	√
CCB4				0.00		√
VR37	ADUP			0.15		√
"	ASPK			1.12	%R=96	√
"	B					
"	C					
"	D					
"	E					
"	F					
"	G					
"	H					
"	I					
CCV6				3.60	%R=90	√
CCB5		↓	↓	0.00		√

Chemical/Reagent ID:

10% $SnCl_2$: MP2391 14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7 ICV/CCV: SC-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-7-12

Page: 3 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
VR37	J	SMM	1X		
"	K				
"	L				
"	M				
"	N				
"	O				
VR38	MBI			-0.00	✓
"	MBISPK			1.81	%R=91 ✓
"	A			0.11	
"	AOUP			0.10	✓
CCV7				3.64	%R=91 ✓
CCB6				0.00	✓
VR38	ASPK			1.07	%R=96 ✓
"	B				
"	C				
"	D				
"	E				
"	F				
"	G				
"	H				
"	I				
"	J				
CCV8				3.61	%R=90 ✓
CCB7				-0.00	✓
VR82	A				
"	B				
"	C				
"	D				
"	E				
"	F	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 4 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
VR82 G	5MM	1X			
" H					
" I					
CCV9			3.56	%R=89	✓
CCB8			0.00		✓
VR30 MB1			-0.00		✓
" MB1SPK			1.82	%R=91	✓
" A			0.92		
" ADUP			0.93	RPD=1.08	✓
" ASPK			1.78	%R=86	✓
" B					
" C					
" D					
" E					
" F					
CCV10			3.71	%R=93	✓
CCB9			-0.00		✓
VR30 G					
" H					
" I					
" J					
" K					
" L					
VR36 MB1			0.00		✓
" MB1SPK			1.89	%R=95	✓
" A			0.77		
" ADUP			0.74	RPD=3.97	✓
CCV11			3.72	%R=93	✓
CCB10			0.00		✓
VR36 ASPK	↓	↓	1.72	%R=95	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 5 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR36 B	SMM	1X		
" C				
" D				
" E				
" F				
" G				
" H				
" I				
" J				
CCV12			3.66	%R=92 ✓
CCB11			-0.00	✓
VR36 K				
" L				
VR35 MB1			0.00	✓
" MB1SPK			1.84	%R=92 ✓
" A			0.34	
" APDUP			0.34	✓
" APSPK			1.29	%R=95 ✓
" B				
" C				
" D				
CCV13			3.61	%R=90 ✓
CCB12			-0.03	✓
VR35 E				
" F				
" G				
" H				
" I				
" J				
" K	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP230

Standard ID:

Standard: 20927

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM Date: 11-17-12

Instrument: CETAC Page: 6 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR35 L	5mM	1X		
CCV14			3.55	%R=89 ✓
CCB13			-0.00	✓
VR32 MB1			0.01	✓
" MBSPK			1.79	%R=90 ✓
" A			0.47	
" ADUP			0.44	✓
" ASPK			1.37	%R=90 ✓
" B				
" C				
" D				
" E				
" F				
CCV15			3.45	%R=86 ✓
CCB14			-0.00	✓
VR32 G				
" H				
" I				
" J				
" K				
" L				
VR65 MB1			0.03	✓
" MBSPK			1.74	%R=87 ✓
" A			1.22	
" ADUP			1.18	RPD=3.33 ✓
CCV16			3.54	%R=89 ✓
CCB15			0.00	✓
VR65 ASPK			2.08	%R=86 ✓
" B				
" C	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2591 14% $NH_2OH/NaCl$: MP2210

Standard ID:

Standard: 2992-7 ICV/CCV: SL-12

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 7 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VRL5 D	SMM	1X		
" E				
" F				
" G				
" H				
" I				
" J				
CCV17			3.46	%R=87 ✓
CCB16			0.00	✓
VRL5 K				
" L				
VR38 MB1			0.01	✓
" MB1SPK			1.64	%R=82 ✓
" A			0.02	
" ADUP			0.03	NO RPD: Undetected ✓
" ASPK			0.86	%R=86 ✓
" B				
" C				
" D				
CCV18			3.65	%R=91 ✓
CCB17			0.00	✓
VR38 E				
" F				
" G				
" H				
" I				
" J				
" K				
CCV19 K DM 11-17-12			3.69	%R=92 ✓
CCB18	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 5C-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 8 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
VR33	MB1	5mm	1x	0.01		√
"	MB1SPK			1.63		√
"	A			1.41		
"	ADUP			1.38	RPD=2.15	√
"	ASPK			2.15	%R=74 LOW	x
"	B					
"	C					
"	D					
"	E					
"	F					
CCV20				3.61	%R=90	√
CCB19				0.00		√
VR33	G					
"	H					
"	I					
"	J					
"	K					
"	L					
VR34	MB1			0.01		√
"	MB1SPK			1.72	%R=86	√
"	A			1.98		
"	ADUP			1.90	RPD=4.12	√
CCV21				3.61	%R=90	√
CCB20				0.03		√
VR34	ASPK			2.87	%R=89	√
"	B					
"	C					
"	D					
"	E					
"	F	↓	↓			

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2320

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM
Instrument: CETAC

Date: 11-17-12
Page: 9 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR34 G	SMM	1X		
" H				
" I				
" J				
CCV22			3.69	%R=92 ✓
CCB21			0.00	✓
VR34 K				
" L				
VR31 MB1			0.00	✓
" MB1SPK			1.82	%R=91 ✓
" A			0.69	
" ADUP			0.70	RPD=1.43 ✓
" ASPK			1.53	%R=84 ✓
" B				
" C				
" D				
CCV23			3.62	%R=91 ✓
CCB22			0.03	✓
VR31 E				
" F				
" G				
" H				
" I				
" J				
" K				
" L				
CCV24			3.64	%R=91 ✓
CCB23			0.00	ENDCLP ✓
~~VR28~~ MB			0.00	✓
" MBSPK	↓	↓	1.73	✓

XDT 11-26-12

Chemical/Reagent ID:
10% $SnCl_2$: MP2391
14% NH_2OH/NaCl: MP2360

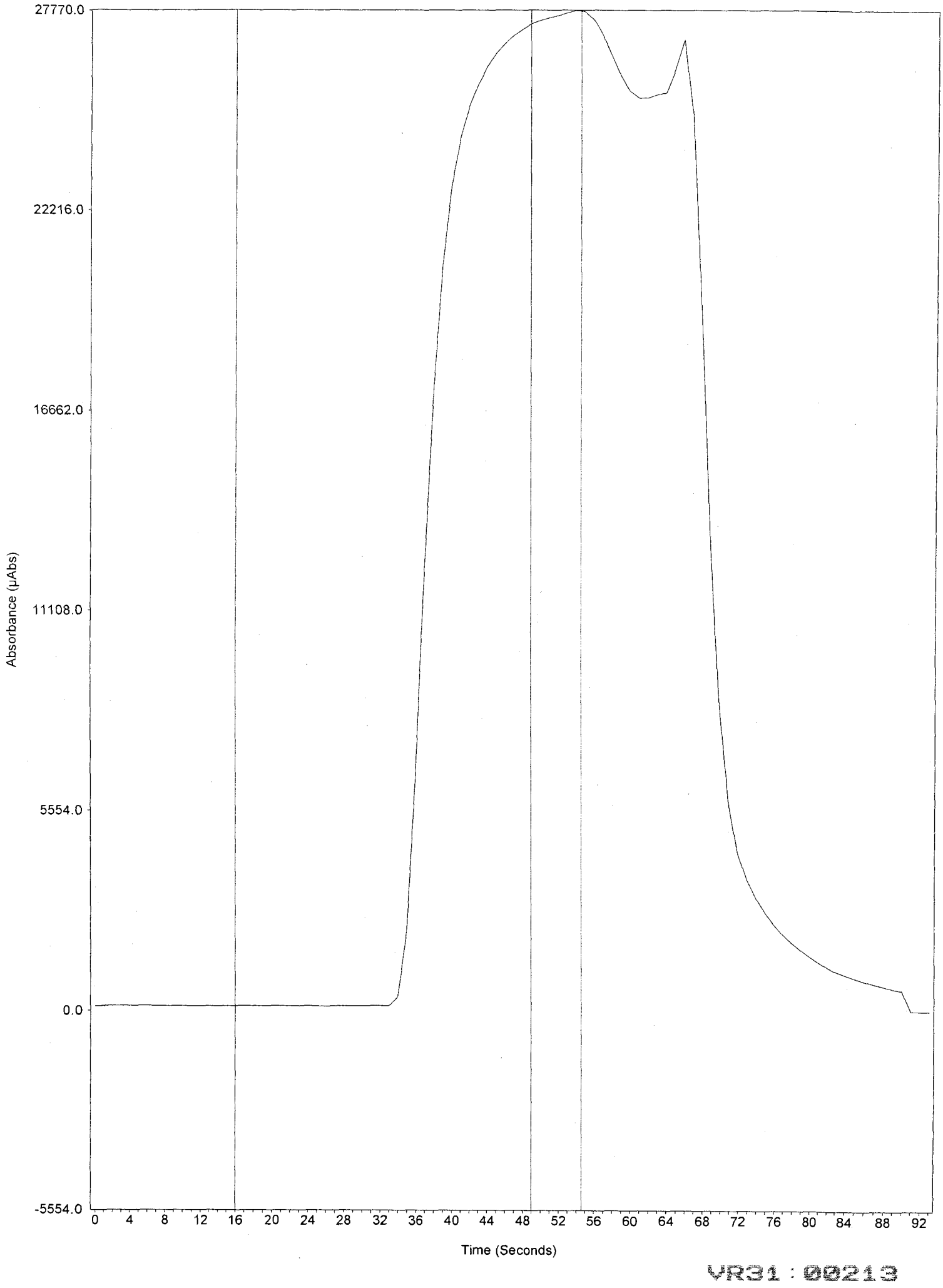
Standard ID:
Standard: 2992-7
ICV/CCV: 56-18

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) Analysis Date: 11-17-12

	Analyst 11-17 om	Peer 11-19	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓		
Calibration Verification:			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See VR33 ASPK
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notes and CAF's:	✓	✓	See CAF


27770.0
22216.0
16662.0
11108.0
5554.0
0.0
-5554.0
Absorbance (µAbs)
0
4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)
VR31 : 00213

CETAC Hg Analysis Report - 12111700.DB - Saturday, November 17, 2012, 2:36:51 PM

✓ 11-19-12 AS

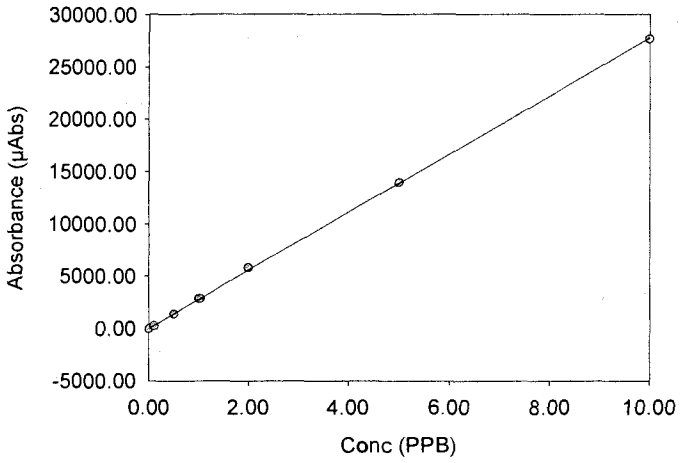
Analyst
Date Started Saturday, November 17, 2012, 06:44:12
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	17-Nov-2012, 06:44	10.00	0.46	27500.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	17-Nov-2012, 06:46	0.00	4.58	-33.10	1.00	
Standard #1	17-Nov-2012, 06:47	0.10	0.53	261.00	1.00	
Standard #2	17-Nov-2012, 06:49	0.50	0.24	1400.00	1.00	
Standard #3	17-Nov-2012, 06:51	1.00	0.45	2840.00	1.00	
Standard #4	17-Nov-2012, 06:52	2.00	0.54	5790.00	1.00	
Standard #5	17-Nov-2012, 06:54	5.00	0.29	14000.00	1.00	
Standard #6	17-Nov-2012, 06:56	10.00	0.39	27700.00	1.00	

Calibration Data



Int.	0.000
Slope	2778.015
Correlation	0.99994

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	17-Nov-2012, 07:05	7.26	0.75	20200.00	1.00	
ICB	17-Nov-2012, 07:06	-0.01	13.00	-18.40	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:08	3.69	0.28	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:09	-0.00	56.00	-2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	17-Nov-2012, 07:11	0.10	0.42	267.00	1.00	
VS18 MB1 SMM	17-Nov-2012, 07:13	0.01	13.00	20.30	1.00	
VS18 MB1SPK SMM	17-Nov-2012, 07:14	1.90	0.60	5270.00	1.00	
VS18 A SMM	17-Nov-2012, 07:16	1.08	0.64	3000.00	1.00	
VS18 ADUP SMM	17-Nov-2012, 07:17	1.05	0.46	2910.00	1.00	
VS18 ASPK SMM	17-Nov-2012, 07:19	2.04	0.80	5660.00	1.00	
VS18 B SMM	17-Nov-2012, 07:21	0.70	0.68	1940.00	1.00	
VS18 C SMM	17-Nov-2012, 07:22	0.59	0.86	1640.00	1.00	
VS18 D SMM	17-Nov-2012, 07:24	0.77	0.48	2150.00	1.00	
VS18 E SMM	17-Nov-2012, 07:26	0.71	0.45	1970.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:27	3.65	0.49	10100.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 07:29:22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:29	0.00	11.10	10.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 07:31	0.31	1.08	873.00	1.00	
VS18 G SMM	17-Nov-2012, 07:32	0.25	0.62	691.00	1.00	
VS18 H SMM	17-Nov-2012, 07:34	1.02	1.42	2840.00	1.00	
VS18 I SMM	17-Nov-2012, 07:35	3.94	0.68	10900.00	1.00	
VS18 J SMM	17-Nov-2012, 07:37	2.53	0.19	7030.00	1.00	
VS18 K SMM	17-Nov-2012, 07:38	1.94	0.22	5380.00	1.00	
VS18 L SMM	17-Nov-2012, 07:40	0.88	0.27	2440.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 07:42	0.00	17.70	12.90	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 07:43	2.04	0.47	5660.00	1.00	
VR37 A SMM	17-Nov-2012, 07:45	0.19	0.58	514.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:47	1.76	0.86	4880.00	1.00	Q - LOW QR
QC Standard	17-Nov-2012, 07:58	3.63	0.54	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:00	0.00	11.60	11.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 08:02	0.30	0.58	846.00	1.00	
VS18 G SMM	17-Nov-2012, 08:03	0.25	0.72	683.00	1.00	
VS18 H SMM	17-Nov-2012, 08:05	1.00	0.78	2780.00	1.00	
VS18 I SMM	17-Nov-2012, 08:06	3.88	0.67	10800.00	1.00	
VS18 J SMM	17-Nov-2012, 08:08	2.42	0.57	6730.00	1.00	
VS18 K SMM	17-Nov-2012, 08:09	1.81	0.67	5030.00	1.00	
VS18 L SMM	17-Nov-2012, 08:11	0.79	0.94	2190.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 08:13	0.01	4.00	19.20	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 08:14	1.74	0.56	4840.00	1.00	
VR37 A SMM	17-Nov-2012, 08:16	0.16	1.44	442.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:18	3.59	0.50	9980.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:19	0.00	13.00	9.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 ADUP SMM	17-Nov-2012, 08:21	0.15	0.54	416.00	1.00	
VR37 ASPK SMM	17-Nov-2012, 08:23	1.12	0.62	3120.00	1.00	
VR37 B SMM	17-Nov-2012, 08:24	0.09	0.36	242.00	1.00	
VR37 C SMM	17-Nov-2012, 08:26	0.28	1.03	768.00	1.00	
VR37 D SMM	17-Nov-2012, 08:27	1.41	0.61	3910.00	1.00	
VR37 E SMM	17-Nov-2012, 08:29	2.23	0.82	6190.00	1.00	
VR37 F SMM	17-Nov-2012, 08:31	0.79	0.67	2210.00	1.00	
VR37 G SMM	17-Nov-2012, 08:32	2.39	0.51	6630.00	1.00	
VR37 H SMM	17-Nov-2012, 08:34	3.87	0.37	10800.00	1.00	
VR37 I SMM	17-Nov-2012, 08:35	0.48	0.20	1340.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:37	3.60	0.66	9990.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:39	0.00	124.00	1.77	1.00	

Analyst
Date Started Saturday, November 17, 2012, 08:40:49
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 J SMM	17-Nov-2012, 08:40	1.27	0.51	3520.00	1.00	
VR37 K SMM	17-Nov-2012, 08:42	1.51	2.55	4190.00	1.00	
VR37 L SMM	17-Nov-2012, 08:44	1.16	0.58	3220.00	1.00	
VR37 M SMM	17-Nov-2012, 08:45	1.05	0.38	2900.00	1.00	
VR37 N SMM	17-Nov-2012, 08:47	1.19	0.74	3310.00	1.00	
VR37 O SMM	17-Nov-2012, 08:48	0.83	0.81	2300.00	1.00	
VR58 MB1 SMM	17-Nov-2012, 08:50	-0.00	33.50	-6.40	1.00	
VR58 MB1SPK SMM	17-Nov-2012, 08:52	1.81	0.54	5040.00	1.00	
VR58 A SMM	17-Nov-2012, 08:53	0.11	0.89	295.00	1.00	
VR58 ADUP SMM	17-Nov-2012, 08:55	0.10	0.57	281.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:56	3.64	0.48	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:58	0.00	9.27	8.18	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR58 ASPK SMM	17-Nov-2012, 09:00	1.07	0.63	2970.00	1.00	
VR58 B SMM	17-Nov-2012, 09:01	0.10	0.59	283.00	1.00	
VR58 C SMM	17-Nov-2012, 09:03	0.11	0.53	309.00	1.00	
VR58 D SMM	17-Nov-2012, 09:05	0.10	0.66	274.00	1.00	
VR58 E SMM	17-Nov-2012, 09:06	0.11	0.48	304.00	1.00	
VR58 F SMM	17-Nov-2012, 09:08	0.41	0.62	1150.00	1.00	
VR58 G SMM	17-Nov-2012, 09:10	0.06	0.39	175.00	1.00	
VR58 H SMM	17-Nov-2012, 09:11	0.06	0.63	161.00	1.00	
VR58 I SMM	17-Nov-2012, 09:13	0.10	1.03	271.00	1.00	
VR58 J SMM	17-Nov-2012, 09:14	0.05	1.41	126.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:16	3.61	0.66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:18	-0.00	300.00	-1.14	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR82 A SMM	17-Nov-2012, 09:19	0.22	0.73	605.00	1.00	
VR82 B SMM	17-Nov-2012, 09:21	0.10	2.50	265.00	1.00	
VR82 C SMM	17-Nov-2012, 09:23	0.08	1.51	214.00	1.00	
VR82 D SMM	17-Nov-2012, 09:24	0.11	1.66	312.00	1.00	
VR82 E SMM	17-Nov-2012, 09:26	0.15	0.65	428.00	1.00	
VR82 F SMM	17-Nov-2012, 09:28	0.16	0.78	453.00	1.00	
VR82 G SMM	17-Nov-2012, 09:29	0.13	0.84	355.00	1.00	
VR82 H SMM	17-Nov-2012, 09:31	0.12	0.60	343.00	1.00	
VR82 I SMM	17-Nov-2012, 09:32	0.12	0.86	328.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:34	3.56	0.61	9900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:36	0.00	42.80	6.11	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 MB1 SMM	17-Nov-2012, 09:38	-0.00	64.10	-2.94	1.00	
VR30 MB1SPK SMM	17-Nov-2012, 09:39	1.82	0.61	5060.00	1.00	
VR30 A SMM	17-Nov-2012, 09:41	0.92	0.74	2550.00	1.00	
VR30 ADUP SMM	17-Nov-2012, 09:43	0.93	0.60	2590.00	1.00	
VR30 ASPK SMM	17-Nov-2012, 09:44	1.78	0.74	4940.00	1.00	
VR30 B SMM	17-Nov-2012, 09:46	0.58	0.75	1620.00	1.00	
VR30 C SMM	17-Nov-2012, 09:47	0.68	0.60	1890.00	1.00	
VR30 D SMM	17-Nov-2012, 09:49	0.80	0.75	2230.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 09:51:06
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 E SMM	17-Nov-2012, 09:51	0.55	0.51	1540.00	1.00	
VR30 F SMM	17-Nov-2012, 09:52	0.67	0.54	1860.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:54	3.71	0.80	10300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:56	-0.00	235.00	-1.21	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 G SMM	17-Nov-2012, 09:57	0.82	0.55	2280.00	1.00	
VR30 H SMM	17-Nov-2012, 09:59	0.58	0.47	1610.00	1.00	
VR30 I SMM	17-Nov-2012, 10:00	0.60	1.07	1670.00	1.00	
VR30 J SMM	17-Nov-2012, 10:02	0.53	3.49	1480.00	1.00	
VR30 K SMM	17-Nov-2012, 10:04	0.67	0.52	1870.00	1.00	
VR30 L SMM	17-Nov-2012, 10:05	0.81	0.51	2260.00	1.00	
VR36 MB1 SMM	17-Nov-2012, 10:07	0.00	24.00	6.55	1.00	
VR36 MB1SPK SMM	17-Nov-2012, 10:08	1.89	0.89	5240.00	1.00	
VR36 A SMM	17-Nov-2012, 10:10	0.77	0.47	2130.00	1.00	
VR36 ADUP SMM	17-Nov-2012, 10:12	0.74	0.37	2050.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:13	3.72	0.44	10300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:15	0.00	103.00	2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 ASPK SMM	17-Nov-2012, 10:17	1.72	0.45	4770.00	1.00	
VR36 B SMM	17-Nov-2012, 10:18	2.59	0.47	7210.00	1.00	
VR36 C SMM	17-Nov-2012, 10:20	1.64	0.64	4540.00	1.00	
VR36 D SMM	17-Nov-2012, 10:22	1.79	0.44	4980.00	1.00	
VR36 E SMM	17-Nov-2012, 10:23	0.37	0.51	1040.00	1.00	
VR36 F SMM	17-Nov-2012, 10:25	0.18	0.87	511.00	1.00	
VR36 G SMM	17-Nov-2012, 10:26	0.13	0.85	371.00	1.00	
VR36 H SMM	17-Nov-2012, 10:28	1.34	0.57	3710.00	1.00	
VR36 I SMM	17-Nov-2012, 10:30	1.20	0.50	3330.00	1.00	
VR36 J SMM	17-Nov-2012, 10:31	1.04	0.35	2890.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:33	3.66	0.32	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:34	-0.00	6.61	-7.46	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 K SMM	17-Nov-2012, 10:36	2.70	0.46	7500.00	1.00	
VR36 L SMM	17-Nov-2012, 10:38	0.27	0.35	752.00	1.00	
VR35 MB1 SMM	17-Nov-2012, 10:39	0.00	17.80	8.76	1.00	
VR35 MB1SPK SMM	17-Nov-2012, 10:41	1.84	0.58	5120.00	1.00	
VR35 A SMM	17-Nov-2012, 10:43	0.34	0.50	941.00	1.00	
VR35 ADUP SMM	17-Nov-2012, 10:44	0.34	0.37	935.00	1.00	
VR35 ASPK SMM	17-Nov-2012, 10:46	1.29	0.57	3580.00	1.00	
VR35 B SMM	17-Nov-2012, 10:48	0.42	0.73	1160.00	1.00	
VR35 C SMM	17-Nov-2012, 10:49	0.07	1.65	193.00	1.00	
VR35 D SMM	17-Nov-2012, 10:51	0.06	0.49	162.00	1.00	

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Date Started Saturday, November 17, 2012, 10:52:53
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Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:52	3.61	0.66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:54	-0.03	5.41	-77.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR35 E SMM	17-Nov-2012, 10:56	0.23	0.62	648.00	1.00	
VR35 F SMM	17-Nov-2012, 10:57	1.55	0.66	4300.00	1.00	
VR35 G SMM	17-Nov-2012, 10:59	1.46	0.62	4060.00	1.00	
VR35 H SMM	17-Nov-2012, 11:01	0.41	0.48	1140.00	1.00	
VR35 I SMM	17-Nov-2012, 11:02	1.17	1.09	3260.00	1.00	
VR35 J SMM	17-Nov-2012, 11:04	0.93	0.51	2590.00	1.00	
VR35 K SMM	17-Nov-2012, 11:06	1.11	0.64	3080.00	1.00	
VR35 L SMM	17-Nov-2012, 11:07	1.31	0.58	3630.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:09	3.55	0.50	9850.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:11	-0.00	33.50	-2.69	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 MB1 SMM	17-Nov-2012, 11:13	0.01	3.64	20.40	1.00	
VR32 MB1SPK SMM	17-Nov-2012, 11:14	1.79	0.83	4960.00	1.00	
VR32 A SMM	17-Nov-2012, 11:16	0.47	0.63	1300.00	1.00	
VR32 ADUP SMM	17-Nov-2012, 11:17	0.44	0.66	1220.00	1.00	
VR32 ASPK SMM	17-Nov-2012, 11:19	1.37	0.54	3810.00	1.00	
VR32 B SMM	17-Nov-2012, 11:21	0.82	0.58	2280.00	1.00	
VR32 C SMM	17-Nov-2012, 11:22	0.31	0.79	871.00	1.00	
VR32 D SMM	17-Nov-2012, 11:24	0.43	0.58	1200.00	1.00	
VR32 E SMM	17-Nov-2012, 11:25	0.50	0.71	1390.00	1.00	
VR32 F SMM	17-Nov-2012, 11:27	0.39	0.77	1080.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:29	3.45	0.56	9570.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:30	-0.00	49.10	-3.41	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 G SMM	17-Nov-2012, 11:32	0.31	0.19	870.00	1.00	
VR32 H SMM	17-Nov-2012, 11:34	0.24	0.61	659.00	1.00	
VR32 I SMM	17-Nov-2012, 11:35	0.25	0.45	692.00	1.00	
VR32 J SMM	17-Nov-2012, 11:37	0.17	0.58	483.00	1.00	
VR32 K SMM	17-Nov-2012, 11:38	0.37	0.81	1020.00	1.00	
VR32 L SMM	17-Nov-2012, 11:40	2.05	0.61	5700.00	1.00	
VR65 MB1 SMM	17-Nov-2012, 11:42	0.03	1.01	82.40	1.00	
VR65 MB1SPK SMM	17-Nov-2012, 11:43	1.74	0.69	4820.00	1.00	
VR65 A SMM	17-Nov-2012, 11:45	1.22	0.84	3390.00	1.00	
VR65 ADUP SMM	17-Nov-2012, 11:46	1.18	0.77	3290.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:48	3.54	0.50	9830.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:50	0.00	38.40	2.95	1.00	

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Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR65 ASPK SMM	17-Nov-2012, 11:51	2.08	0.62	5780.00	1.00	
VR65 B SMM	17-Nov-2012, 11:53	1.01	0.72	2810.00	1.00	
VR65 C SMM	17-Nov-2012, 11:55	0.57	0.33	1590.00	1.00	
VR65 D SMM	17-Nov-2012, 11:56	1.38	0.44	3830.00	1.00	
VR65 E SMM	17-Nov-2012, 11:58	0.62	0.57	1710.00	1.00	
VR65 F SMM	17-Nov-2012, 11:59	0.15	0.48	430.00	1.00	
VR65 G SMM	17-Nov-2012, 12:01	0.66	0.75	1850.00	1.00	
VR65 H SMM	17-Nov-2012, 12:03	1.49	0.49	4150.00	1.00	
VR65 I SMM	17-Nov-2012, 12:04	0.94	0.57	2620.00	1.00	
VR65 J SMM	17-Nov-2012, 12:06	0.33	0.59	923.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:08	3.46	0.61	9620.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:09	0.00	19.40	6.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR65 K SMM	17-Nov-2012, 12:11	0.82	0.46	2270.00	1.00	
VR65 L SMM	17-Nov-2012, 12:12	0.01	6.57	28.80	1.00	
VR38 MB1 SMM	17-Nov-2012, 12:14	0.01	9.72	16.80	1.00	
VR38 MB1SPK SMM	17-Nov-2012, 12:16	1.64	0.46	4560.00	1.00	
VR38 A SMM	17-Nov-2012, 12:17	0.02	1.49	62.50	1.00	
VR38 ADUP SMM	17-Nov-2012, 12:19	0.03	4.02	73.90	1.00	
VR38 ASPK SMM	17-Nov-2012, 12:21	0.86	0.81	2400.00	1.00	
VR38 B SMM	17-Nov-2012, 12:22	0.04	2.90	113.00	1.00	
VR38 C SMM	17-Nov-2012, 12:24	0.09	1.73	248.00	1.00	
VR38 D SMM	17-Nov-2012, 12:25	0.62	0.51	1720.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:27	3.65	0.73	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:29	0.00	34.90	3.76	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR38 E SMM	17-Nov-2012, 12:30	0.03	1.86	89.20	1.00	
VR38 F SMM	17-Nov-2012, 12:32	0.06	0.77	165.00	1.00	
VR38 G SMM	17-Nov-2012, 12:34	0.07	0.74	181.00	1.00	
VR38 H SMM	17-Nov-2012, 12:35	0.04	2.13	112.00	1.00	
VR38 I SMM	17-Nov-2012, 12:37	0.04	2.85	103.00	1.00	
VR38 J SMM	17-Nov-2012, 12:39	0.08	1.09	209.00	1.00	
VR38 K SMM	17-Nov-2012, 12:40	0.05	1.89	137.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:42	3.69	0.38	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:44	0.00	13.10	11.50	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR33 MB1 SMM	17-Nov-2012, 12:46	0.01	6.76	21.20	1.00	
VR33 MB1SPK SMM	17-Nov-2012, 12:48	1.83	0.58	5070.00	1.00	
VR33 A SMM	17-Nov-2012, 12:49	1.41	0.59	3920.00	1.00	
VR33 ADUP SMM	17-Nov-2012, 12:51	1.38	0.56	3820.00	1.00	
VR33 ASPK SMM	17-Nov-2012, 12:52	2.15	0.53	5980.00	1.00	- Low %R
VR33 B SMM	17-Nov-2012, 12:54	0.73	0.47	2030.00	1.00	
VR33 C SMM	17-Nov-2012, 12:55	1.77	0.52	4930.00	1.00	
VR33 D SMM	17-Nov-2012, 12:57	0.79	0.75	2190.00	1.00	
VR33 E SMM	17-Nov-2012, 12:59	0.96	0.59	2680.00	1.00	
VR33 F SMM	17-Nov-2012, 13:00	0.51	0.95	1420.00	1.00	

VR31 : 00219

Analyst
Date Started Saturday, November 17, 2012, 13:02:29
Worksheet ARI 10ppb CALIB
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Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:02	3.61	0.72	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:04	0.00	67.40	2.71	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR33 G SMM	17-Nov-2012, 13:05	0.17	0.17	483.00	1.00	
VR33 H SMM	17-Nov-2012, 13:07	0.13	0.37	359.00	1.00	
VR33 I SMM	17-Nov-2012, 13:09	0.71	0.50	1960.00	1.00	
VR33 J SMM	17-Nov-2012, 13:10	1.13	0.60	3150.00	1.00	
VR33 K SMM	17-Nov-2012, 13:12	1.02	0.57	2830.00	1.00	
VR33 L SMM	17-Nov-2012, 13:13	0.55	0.33	1530.00	1.00	
VR34 MB1 SMM	17-Nov-2012, 13:15	0.01	6.11	19.70	1.00	
VR34 MB1SPK SMM	17-Nov-2012, 13:17	1.72	0.56	4790.00	1.00	
VR34 A SMM	17-Nov-2012, 13:18	1.98	0.47	5490.00	1.00	
VR34 ADUP SMM	17-Nov-2012, 13:20	1.90	0.52	5270.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:21	3.61	0.45	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:23	0.03	5.22	77.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR34 ASPK SMM	17-Nov-2012, 13:25	2.87	0.56	7960.00	1.00	
VR34 B SMM	17-Nov-2012, 13:26	1.07	0.60	2960.00	1.00	
VR34 C SMM	17-Nov-2012, 13:28	0.73	0.44	2020.00	1.00	
VR34 D SMM	17-Nov-2012, 13:30	1.43	0.42	3980.00	1.00	
VR34 E SMM	17-Nov-2012, 13:31	1.22	0.67	3400.00	1.00	
VR34 F SMM	17-Nov-2012, 13:33	1.11	0.54	3070.00	1.00	
VR34 G SMM	17-Nov-2012, 13:34	1.63	0.49	4530.00	1.00	
VR34 H SMM	17-Nov-2012, 13:36	0.79	0.41	2180.00	1.00	
VR34 I SMM	17-Nov-2012, 13:38	1.33	0.50	3710.00	1.00	
VR34 J SMM	17-Nov-2012, 13:39	1.13	0.53	3150.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:41	3.69	0.67	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:43	0.00	13.50	6.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR34 K SMM	17-Nov-2012, 13:44	1.28	0.66	3550.00	1.00	
VR34 L SMM	17-Nov-2012, 13:46	0.37	0.33	1030.00	1.00	
VR31 MB1 SMM	17-Nov-2012, 13:47	0.00	10.60	11.90	1.00	
VR31 MB1SPK SMM	17-Nov-2012, 13:49	1.82	0.63	5050.00	1.00	
VR31 A SMM	17-Nov-2012, 13:51	0.69	0.33	1900.00	1.00	
VR31 ADUP SMM	17-Nov-2012, 13:52	0.70	0.48	1930.00	1.00	
VR31 ASPK SMM	17-Nov-2012, 13:54	1.53	0.71	4240.00	1.00	
VR31 B SMM	17-Nov-2012, 13:56	0.86	0.72	2400.00	1.00	
VR31 C SMM	17-Nov-2012, 13:57	0.57	0.75	1570.00	1.00	
VR31 D SMM	17-Nov-2012, 13:59	0.28	0.72	788.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 14:00	3.62	0.44	10100.00	1.00	

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Date Started Saturday, November 17, 2012, 14:02:39
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 14:02	0.03	2.03	77.50	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR31 E SMM	17-Nov-2012, 14:04	0.35	0.34	986.00	1.00	
VR31 F SMM	17-Nov-2012, 14:05	0.32	0.57	880.00	1.00	
VR31 G SMM	17-Nov-2012, 14:07	0.42	0.54	1180.00	1.00	
VR31 H SMM	17-Nov-2012, 14:09	0.42	0.93	1170.00	1.00	
VR31 I SMM	17-Nov-2012, 14:10	0.46	1.69	1270.00	1.00	
VR31 J SMM	17-Nov-2012, 14:12	0.62	0.47	1730.00	1.00	
VR31 K SMM	17-Nov-2012, 14:14	0.95	0.69	2650.00	1.00	
VR31 L SMM	17-Nov-2012, 14:15	0.59	0.49	1630.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 14:17	3.64	0.62	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 14:19	0.00	85.10	3.25	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS28 MB SMM	17-Nov-2012, 14:20	0.00	14.00	9.77	1.00	
VS28 MBSPK SMM	17-Nov-2012, 14:22	1.73	0.50	4810.00	1.00	
VS28 A SMM	17-Nov-2012, 14:23	0.16	0.47	441.00	1.00	
VR68 MB3 SMM	17-Nov-2012, 14:25	0.00	111.00	0.73	1.00	
VR68 MB3SPK SMM	17-Nov-2012, 14:27	1.89	0.70	5250.00	1.00	
VR68 G SMM	17-Nov-2012, 14:28	0.03	2.13	69.60	1.00	
VR68 GDUP SMM	17-Nov-2012, 14:30	0.03	3.15	71.60	1.00	
VR68 GSPK SMM	17-Nov-2012, 14:32	0.98	0.56	2710.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 14:33	3.63	0.59	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 14:35	-0.00	28.50	-6.87	1.00	

11-26-12

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM Instrument: CETAC
Analyst: DM Date: 11-16-12
Bath Temp: 95°C Start Time: 1213 End Time: 1243

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2992-7	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	5614	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: I7633 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

Prep Code: TLM Digested 20.0mL Instrument: CETAC
Analyst: DM Date: 11-15-12
Bath Temp: 95°C Start Time: 1247 End Time: 1447

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	2992-8	0.02	↓	0.02	1
STD2	↓	0.05	↓	0.05	1
STD3	↓	0.10	↓	0.1	1
STD4	↓	0.20	↓	0.2	1
STD5	↓	~~0.50~~ 0.4	↓	0.4	1
STD6	↓	1.00	↓	1.00	1
CRA	↓	002	↓	0.02	1
ICB/CCB	—	0.00	↓	0.0	1
ICV/LCS	2992-9	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:
HNO_3: I7633 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

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Mercury Digestion Log

Prep Code: 5mm
Analyst: DM
Bath Temp: 95°C
Start Time: 1203
Matrix: Soil
Date: 11-13-12
End Time: 1233

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR31 A	1	—	0.710	50.0	11/18 1	(Y)	
" ADUP	1	—	0.706		1		
" ASPK	1	—	0.714		1		
" B	1	—	0.730		1		
" C	1	—	0.728		1		
" D	1	—	0.737		1		
" E	1	—	0.715		1		
" F	1	—	0.732		1		
" G	1	—	0.733		1		
" H	1	—	0.728		1		
" I	1	—	0.719		1		
" J	1	—	0.731		1		
" K	1	—	0.733		1		
" L	1	—	0.748		1		
" MB1	—	—	—		1		
" MB1SPK	—	—	—	50.0	1	(Y)	
			11-13-12 DM				

Chemical/Reagent ID:

HNO_3: IR83
H_2SO_4: I1471
HCl: —
5% $K_2S_2O_8$: MP2375
5% $KMnO_4$: MP2376
Digest Tube Lot: 205298

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR31

Soil Conductivity - pH

meter: Orion Model 115

Date: 10/13/2012

Analyst: KE 10:58

Conductivity Calibration

Potassium Chloride standard *ARI ID =* **N / A**

Conductivity =	**1413**	*µS/cm*
Cal Temp	**N / A**	
Input Value		*µS/cm*

pH Calibration *Temperature (°C)* 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer	pH
Source **FISHER#**	**7.00**

Conductivity Verification Standard

Source: **N / A**

Record Certified Values

µS / cm = **1000**

TDS (mg/l) =

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			21.5	7.03			*OK@ 100.4%*
VQ56 A1	10	20	20.4	6.33			
VQ56 A1 dup	10	20	20.4	6.36			*pH RPD =0.47%*
VQ56 B1	10	20	20.6	5.88			
VR66 A1	20	20	20.5	5.06			
VR66 B1	20	20	20.2	5.68			
VR66 C1	20	20	20.4	5.51			
VR66 D1	20	20	20.1	5.39			
VR66 E1	20	20	20.2	5.11			
VR66 F1	20	20	20.4	4.37			
VR66 G1	20	20	20.4	5.30			
pH 7 Buffer			21.5	7.04			*OK@ 100.6%*
VR66 H1	20	20	20.2	5.07			
VR66 I 1	20	20	20.3	4.43			
VR66 I 1 dup	20	20	20.3	4.41			*pH RPD =0.45%*
VR66 J 1	20	20	20.2	5.30			
VR02 A3	20	20	20.2	7.55			
VR02 A3 dup	20	20	20.2	7.59			*pH RPD =0.53%*
VR85 A2	20	20	20.3	4.46			
VR85 B2	20	20	20.3	3.35			
VR85 C2	20	20	20.5	3.57			
VR85 D2	20	20	20.5	3.54			
pH 7 Buffer			21.8	7.03			*OK@ 100.4%*
VR85 E2	20	20	20.5	3.78			
VR85 F2	20	20	20.5	3.50			
VR85 G4	20	20	20.6	5.42			
VR85 G4 dup	20	20	20.8	5.45			*pH RPD =0.55%*
VR85 H2	20	20	20.8	5.65			
VR85 I 2	20	20	20.8	5.73			
VR85 J 2	20	20	20.8	5.56			
VR85 K2	20	20	20.7	5.36			
VR85 L2	20	20	20.6	5.74			
VR85 M2	20	20	20.6	6.18			
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR84 A2	20	20	20.6	6.36			
VR84 B2	20	20	20.9	6.46			
VR84 C2	20	20	21.0	5.63			
VR84 D2	20	20	20.9	5.38			
VR84 D2 dup	20	20	20.7	5.34			*pH RPD =0.75%*
VR84 E2	20	20	20.7	4.82			
VR84 F2	20	20	20.8	5.34			

VR84 G2	20	20	20.7	5.56			
VR30 A1	10	20	20.8	5.83			
VR30 A1 dup	10	20	20.8	5.86			*pH RPD =0.51%*
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR30 B1	20	20	20.8	5.91			
VR30 C1	10	20	20.7	5.90			
VR30 D1	10	20	20.8	6.06			
VR30 E1	20	20	20.7	6.06			
VR30 F1	20	20	20.8	6.10			
VR30 G1	20	20	20.8	6.24			
VR30 H1	20	20	20.9	5.84			
VR30 I 1	20	20	21.0	5.87			
VR30 J 1	20	20	20.8	5.56			
VR30 K1	20	20	20.8	5.90			
pH 7 Buffer			21.7	7.05			*OK@ 100.7%*
VR30 L1	20	20	20.8	5.68			
VR31 A1	20	20	20.9	5.69			
VR31 B1	20	20	20.8	5.65			
VR31 C1	20	20	20.7	5.73			
VR31 D1	20	20	20.7	5.60			
VR31 E1	20	20	20.9	5.34			
VR31 F1	20	20	20.8	5.48			
VR31 G1	20	20	20.8	5.94			
VR31 H1	20	20	20.9	6.11			
VR31 I 1	20	20	20.9	5.22			
pH 7 Buffer			21.7	7.04			*OK@ 100.6%*
VR31 J 1	20	20	20.9	5.65			
VR31 K1	20	20	21.0	5.85			
VR31 L1	20	20	21.0	5.80			
VR32 A1	20	20	21.0	6.26			
VR32 A1 dup	20	20	21.0	6.24			*pH RPD =0.32%*
VR32 B1	20	20	21.2	5.27			
VR32 C1	20	20	21.1	5.97			
VR32 D1	20	20	21.0	5.58			
VR32 E1	20	20	21.1	6.26			
VR32 F1	20	20	21.1	5.87			
pH 7 Buffer			21.3	7.02			*OK@ 100.3%*
VR32 G1	20	20	21.1	5.69			
VR32 H1	20	20	21.0	5.80			
VR32 I 1	20	20	20.9	5.91			
VR32 J 1	20	20	20.9	5.89			
VR32 K1	20	20	21.0	6.58			
VR32 L1	10	20	20.9	5.63			
VR85 N1	20	20	20.7	6.74			
pH 7 Buffer			21.6	7.04			*OK@ 100.6%*

(1) 11-13-12 (W)

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (1)

Analyst: (W) 10:58

Conductivity Calibration

Potassium Chloride standard ARI ID = _____

Conductivity =	1413	µS/cm
Cal Temp		
Input Value		µS/cm

pH Calibration *Temperature (°C)* 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer	pH
Source FISHER#	7.00

Conductivity Verification Standard

Source:

Record Certified Values

µS / cm =	1000
TDS (mg/l) =	

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			~~21.5~~	7.03			
VQS6 A1	10	20	20.4	6.33			
↓ nnA1	10	20	20.4	6.36			
↓ B1	10	20	20.6	5.88			
VR166 A1		~~20.5~~	~~20.6~~ (1)	5.06			
B1			20.2	5.68			
C1			20.4	5.51			
D1			20.1	5.39			
E1			20.2	5.41			
F1			20.4	4.37			
↓ G1			20.4	5.30			
pH 7 Buffer		21.5	~~20.0~~ (1)	7.04			
VR166 H1			20.2	5.07			
I1			20.3	4.43			
↓ nnI1			20.3	4.41			
↓ J1			20.2	5.30			
VR02 A3			20.2	2.55			
↓ nnA3			20.2	2.59			
VR85 A2			20.3	4.46			
B2			20.3	3.35			
C2			20.5	3.57			
↓ D2			20.5	~~20.5~~	354		
pH 7 Buffer		21.8	(1) ~~20~~	7.03			
VR85 E2			20.5	3.78			
F2			20.5	3.50			
G2		20.6	~~8.5~~ (1)	~~20.6~~	5.42		
nnG2			20.8	5.45			
H2			20.8	5.65			
I2			20.8	5.73			
J2			20.8	5.56			
K2			20.7	5.36			
L2			20.6	5.74			
↓ M2			20.6	6.18			
pH 7 Buffer			21.4	7.05			

Page 1 of 2

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (W) 10:58

Analyst: (N)

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
VR84 A2			20.6	6.36			
B2			20.9	6.46			
C2			21.0	5.63			
D6			20.9	5.38			
rD6			20.7	5.34			
E2			20.7	4.82			
F2			20.8	5.34			
G2			20.7	5.56			
VR30 A1	10	20	20.8	5.83			
rA1	10	20	20.8	5.86			
pH 7 Buffer			21.4	~~7.00~~ (1) 7.05			
VR30 B1			20.8	5.91			
C1	10	20	20.7	5.90			
D1	10	20	20.8	6.06			
E1			20.7	6.06			
F1			20.8	6.10			
G1			20.8	6.24			
H1			20.9	5.84			
I1			21.0	5.87			
J1			20.8	5.56			
K1			20.8	5.90			
pH 7 Buffer			21.7	7.05			
VR30 L1			20.8	2.68			
VR31 A1			20.9	5.69			
B1			20.8	5.65			
C1			20.7	5.73			
D1			20.7	5.60			
E1			20.9	5.34			
F1			20.8	5.48			
G1			20.8	5.94			
H1			20.9	6.11			
I1			20.9	5.22			
pH 7 Buffer			21.7	7.04			
VR31 J1			20.9	5.65			
K1		21.0	~~21.0~~ (1)	5.85			
L1			21.0	5.80			
VR32 A1			21.0	6.26			
rA1			21.0	6.24			
B1			21.2	5.27			
C1			21.1	5.97			
D1			21.0	5.58			
E1			21.1	6.26			
F1			21.1	5.87			
pH 7 Buffer			21.3	7.02			
VR32 G1			21.1	5.69			
H1			21.0	5.80			
I1			20.9	5.91			
J1			20.9	5.89			
K1			21.0	6.58			
(2) L1	10	20	20.9	5.63			
VR33 A1							
rA1							
B1				11-13-12 (N)			
C1							
pH 7 Buffer			21.6	7.04			

(2) VR85 N1 - 20 - 20 - 20.7 - 6.74 (W) 11-13-12 (N)

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pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca	1205264	2.00	21.6
Analyst:	(W)		4.00	Fisher	108305	4.00	21.4
			7.00	Ricca	206053	7.01	21.6
			10.00	Fisher	116346	10.05	21.4
			12.00	Ricca	1206157	11.97	21.3
			Verification	Fisher	120143	7.03	21.5

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
(W)	10:58	ICV	7.03	7.03			21.5
		VQ56A'	6.33	6.33			20.4
		dupA'	6.35	6.36			20.4
		B'	5.88	5.88			20.6
		VR66A'	5.06	5.06			20.5
		B'	5.67	5.68			20.2
		C'	5.56	5.57			20.4
		D'	5.39	5.39			20.1
		E'	5.11	5.11			20.2
		F'	4.35	4.37			20.4
		G'	5.30	5.30			20.4
		CCV	7.04	7.04			21.5
		VR66H'	5.06	5.07			20.2
		I'	4.43	4.43			20.3
		dupI'	4.40	4.41			20.3
		J'	5.30	5.30			20.2
		VR02A3	7.55	7.55			20.2
		dupA3	7.58	7.59			20.2
		VR85A2	4.46	4.46			20.3
		B2	3.35	3.35			20.3
		C2	3.57	3.57			20.5
		D2	3.54	3.54			20.5
		CCV	7.04	7.03			21.8

Analytical Resources, Incorporated
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pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10.42		2.00	Ricca			
Analyst:	@		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
@	10:58	~~VR85 rev~~ E[2]	3.77	3.78			20.5
		F[2]	3.80	3.80			20.5
		G[4]	5.40	5.42			20.6
		mG[4]	5.45	5.45			20.8
		H[2]	5.65	5.65			20.8
		I[2]	5.75	5.73			20.8
		J[2]	5.56	5.56			20.8
		K[2]	5.34	5.36			20.7
		L[2]	5.75	5.74			20.6
		M[2]	6.19	6.18			20.6
			@	~~11-13-12~~			
		CCV	7.05	7.05			21.4
		VR84 A[2]	6.37	6.36			20.6
		B[2]	6.46	6.46			20.9
		C[2]	5.63	5.63			21.0
		D[6]	5.38	5.38			20.9
		mD[6]	5.31	5.34			20.7
		E[2]	4.81	4.82			20.7
		F[2]	5.34	5.34			20.8
		G[2]	5.54	5.56			20.7
		VR30 A[7]	5.82	5.83			20.8
		mA[2]	5.84	5.86			20.8
		CCV	7.04	7.05			21.4

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(2) 7.05 11-13-12 (W)

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	10-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(W)		4.00	Fisher			
			7.00	Ricca	cont		
			10.00	Fisher			
			12.00	Ricca			
			Verification	~~Fisher~~			

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W)	10:58	~~VR30~~ ~~ICV~~ B'	5.90	5.91			20.8
		C'	5.91	5.90			20.7
		D'	6.05	6.06			20.8
		E'	6.06	6.06			20.7
		F' ~~(2)~~	6.10	6.10			20.8
		G'	6.24	6.24			20.8
		H'	5.84	5.84			20.9
		I'	5.87	5.87			21.0
		J'	5.57	5.56			20.8
		K'	5.89	5.90			20.8
		CCV'	~~5.66~~ (2)	7.05			(1) ~~20.8~~ 21.7
	VR30	~~VR30~~ CCV L'	5.67	5.68			20.8
		VR31 A'	5.69	5.69			20.9
		B'	5.65	5.65			20.8
		C'	5.72	5.73			20.7
		D'	5.60	5.60			20.7
		E'	5.34	5.34			20.9
		F'	5.48	5.48			20.8
		G'	5.93	(1) ~~5.95~~ 5.94			20.8
		H'	6.11	6.11			20.9
		I'	5.22	5.22			20.9
		~~CCV~~ CCV	7.05	7.04			21.7
		VR31 ~~CCV~~ J'	5.68	5.68			20.9

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pH Logbook

Meter ID: Accumet AR60

(1) 11-13-12 (RW)

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(2)		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

cont.

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(1) ~~VR31 KI~~	10:58	~~VR31 KI~~ ICV	5.85	5.85			21.0
		L1	5.79	5.80			21.0
		VR32 A	6.26	6.26			21.0
		DDA	6.25	6.24			21.0
		B'	5.27	5.27			21.2
		C'	5.97	5.97			21.1
		D'	5.59	5.58			21.0
		E'	6.26	6.26			21.1
		F'	5.87	5.87			21.1
		CCV G0	7.01	7.02			21.3
		VR32 H0 G'	5.70	5.69			21.1
		~~CCV~~ 0 H'	6.80	5.80			21.0
		I'	5.89	5.91			20.9
		J'	5.89	5.89			20.9
		K'	6.58	6.58			21.0
		L'	5.63	5.63			20.9
(2)		CCV	7.04	7.04			21.1
		~~CCV~~					

11-13-12 (RW)

(2) - N - 20 - 20 - 20.7 6.24

11-13-12 (RW)

VR31 : 00233

W
11-15-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 11/12/12 (C)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 18:31

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time	*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm	*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
11/12/2012 18:31 date/time in oven	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
11/13/2012 9:58 date/time out		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs = 15.5		*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	11/12/12 17:24 KE	11/12/12 18:09 KE	11/13/12 10:12 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank			1.0952	1.0950			0.00							
VR31 I 1		6.0678	1.1028	5.8541			4.75	95.7%						
VR31 I 1 dup		6.0649	1.1166	5.9694			4.85	98.1%						
							RPD =	2.45%				RPD =	NA	
VR31 I 1 trp		6.1533	1.0929	6.0624			4.97	98.2%						
							RSD =	1.45%				RSD =	NA	
VR31 J 1		6.1942	1.0727	6.1138			5.04	98.4%						
VR31 K1		6.5827	1.1017	6.4743			5.37	98.0%						
VR31 L1		6.5713	1.0866	6.4299			5.34	97.4%						
VR32 A1		6.3546	1.0866	6.2210			5.13	97.5%						
VR32 B1		6.3523	1.0839	6.2392			5.16	97.9%						
VR32 C1		6.8896	1.0895	6.7346			5.65	97.3%						
VR32 D1		6.7523	1.0915	6.6132			5.52	97.5%						
VR32 E1		6.0662	1.0804	5.9423			4.86	97.5%						
VR32 F1		6.7568	1.0869	6.6309			5.54	97.8%						
VR32 G1		6.3739	1.1179	6.2795			5.16	98.2%						
VR32 H1		6.1536	1.0917	6.0659			4.97	98.3%						
VR32 I 1		6.4752	1.0813	6.3960			5.31	98.5%						
CR32 J 1		6.6287	1.0750	6.5857			5.51	99.2%						
VR32 K1		6.0090	1.1221	5.9324			4.81	98.4%						
VR32 L1		6.0870	1.0999	5.8111			4.71	94.5%						
VR33 A1		5.6487	1.0842	5.4535			4.37	95.7%						
VR33 B1		6.7026	1.0885	6.5715			5.48	97.7%						
VR33 C1		5.3763	1.0903	5.1571			4.07	94.9%						
VR33 D1		6.6028	1.1121	6.4991			5.39	98.1%						

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 11-12-12 (W) (2)

Analyst: (W)	Date: 11-12-12	Oven ID:	Balance ID: 1123230597
Time in Oven: 18:31	Time Out of Oven: 9:58	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02 10:12	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	11-12-12 17:24	11-12-12 19:09	11-13-12 1504 (1)						
Cal Weight (10.0000):	10.0000 (W)	10.0000 (W)	10.0000 (W)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	Dry Weight 104°C 2	Dry Weight 104°C 3	Dry Weight grams	Ash Weight 550°C 1	Ash Weight 550°C 2	Ash Weight 550°C 3
BLANK	24	~~1.0952~~ 0.000	1.0952	1.0950						
VR31 I'	25	6.0678	1.1028	20 5.8541						
J'	26	6.0649	1.1166	5.9694						
J'#	27	6.1533	1.0929	~~5.0~~ (1)	6.0624					
J'	28	6.1942	1.0727	6.1138						
K'	29	6.5827	1.1017	6.4743						
L'	30	6.5713	1.0866	6.4299						
VR32 A'	31	6.3546	1.0866	6.2210						
B'	32	6.3523	1.0839	6.2392						
C'	33	6.8816	1.0895	6.7346						
D'	34	6.7523	1.0915	6.6132						
E'	35	6.0662	1.0804	5.9423						
F'	36	6.7568	1.0869	6.6309						
G'	37	6.3739	1.1179	6.2795						
H'	38	6.1536	1.0917	6.0659						
I'	39	6.4752	1.0813	6.3960						
J'	40	6.6287	1.0750	6.5857						
K'	41	6.0090	1.1221	5.9324						
L'	42	6.0870	1.0999	5.8111						
VR33 A'	43	5.6487	1.0942	5.4535						
B'	44	6.7026	1.0885	6.5715						
C'	45	5.3763	1.0903	5.1571						
D'	46	6.6028	1.1121	6.4991						

VR31 : 00635

11-19-

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 11/12/12 (B)
ANALYST: KE / CDE 18:31

Instrumentation

Drying Ovens: 12
Muffle Furnace: N / A
Analytical Balance: 1123230597

Batch drying time		
record times as mm/dd/yy hh:mm		
12/12/2012 18:31	date/time in oven	KE
11/13/2012 9:58	date/time out	KE
elapsed hrs =	-704.5	< 12 hr

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

Cal Weight ID	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02
Date & Time	11/2/12 17:04 KE	11/12/12 14:54 CDE	11/13/12 10:04 KE					
Cal Wt (g) 10.0000	10.0000	10.0000	10.0000					
record weights to 4 places	Cal OK!	Cal OK!	Cal OK!					

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1174	1.1174			0.00							
VR30 A1		6.1530	1.0703	5.5249			4.45	87.6%						
VR30 A1 dup		6.1198	1.0919	5.4725			4.38	87.1%						
							RPD =	0.59%				RPD =	NA	
VR30 A1 trp		6.1464	1.0779	5.4745			4.40	86.7%						
							RSD =	0.52%				RSD =	NA	
VR30 B1		6.1096	1.1116	5.8337			4.72	94.5%						
VR30 C1		6.0701	1.1040	5.8570			4.75	95.7%						
VR30 D1		6.1431	1.1085	5.7694			4.66	92.6%						
VR30 E1		6.6949	1.1327	6.4812			5.35	96.2%						
VR30 F1		6.0421	1.1042	5.8159			4.71	95.4%						
VR30 G1		6.8592	1.0974	6.6230			5.53	95.9%						
VR30 H1		6.1359	1.0803	5.8588			4.78	94.5%						
VR30 I 1		6.1013	1.0884	5.7598			4.67	93.2%						
VR30 J 1		6.1918	1.1133	5.8347			4.72	93.0%						
VR30 K1		6.2462	1.0855	5.9847			4.90	94.9%						
VR30 L1		6.2209	1.1079	5.9622			4.85	94.9%						
VR31 A1		6.2559	1.0667	6.0809			5.01	96.6%						
VR31 B1		6.1677	1.1092	5.9519			4.84	95.7%						
VR31 C1		6.3234	1.0985	6.1734			5.07	97.1%						
VR31 D1		6.7723	1.1009	6.7066			5.61	98.8%						
VR31 E1		6.5613	1.0772	6.4706			5.39	98.3%						
VR31 F1		6.4908	1.0944	6.3871			5.29	98.1%						
VR31 G1		6.2512	1.0979	6.1170			5.02	97.4%						
VR31 H1		6.3758	1.1077	6.2340			5.13	97.3%						

VR31 · 00235

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

① 11-12-12 ② (B)

Analyst: ②/	Date: 11-12-12	Oven ID:	Balance ID: 1123230597
Time in Oven: 16:31	Time Out of Oven: 9:58	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – [redacted] < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	11-12-12 17:09	11-12-12 14:59	11-13-12 10:09						
Cal Weight (10.0000):	10.0000	10.0000	10.0000 ②						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.1174	1.1174						
VR30 A'	2	6.1530	1.0703	5.5249						
A' dp	3	6.1198	1.0919	5.4725						
A' tr	4	6.1469	1.0779	5.4745						
B'	5	6.1096	1.1116	5.8337						
C'	6	6.0701	1.1040	5.8570						
D'	7	6.1431	1.1085	5.7694						
E'	8	6.6949	1.1327	6.4812						
F'	9	6.0421	1.1042	5.8159						
G'	10	6.8592	1.0974	6.6230						
H'	11	6.1359	1.0803	5.8588						
I'	12	6.1013	1.0884	5.7598						
J'	13	6.1918	1.1133	5.8347						
K'	14	6.2462	1.0855	5.9847						
L'	15	6.2209	1.1079	5.9622						
VR31 A'	16	6.2559	1.0667	6.0809						
B'	17	6.1677	1.1092	~~5.94~~ ①	5.9519					
C'	18	6.3234	1.0985	6.1734						
D'	19	6.7723	1.1009	6.7066						
E'	20	6.5613	1.0772	~~6.46~~ ①	6.4706					
F'	21	6.4908	1.0944	6.3871						
G'	22	6.2512	1.0979	6.1170						
H'	23	6.2758	1.1077	6.0346						

VR31 : 00237

TOC Solids Prep Log

DATE: 11/12/12 (B)

ANALYST: KE / CDE 18:53

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID:

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1683		13.1685	0.2 mg	
VR30 A1		-	13.2074	17.3347	17.0939	94.17%	
VR30 A1 dup		-	13.1083	17.2122	17.1241	97.85%	RPD = 3.84%
VR30 A1 trip		-	13.1459	17.3641	16.9674	90.60%	RSD = 3.85%
VR30 B1		-	13.1293	17.6899	17.7141	100.53%	
VR30 C1		-	13.0490	17.5506	17.6279	101.72%	
VR30 D1		-	13.1461	18.2240	18.1329	98.21%	
VR30 E1		-	13.0436	17.9537	18.0756	102.48%	
VR30 F1		-	13.1430	18.2113	18.2997	101.74%	
VR30 G1		-	13.0864	18.9620	19.0435	101.39%	
VR30 H1		-	13.1554	17.5039	17.5577	101.24%	
VR30 I 1		-	13.1993	17.0175	17.0326	100.40%	
VR30 J 1		-	13.1696	17.7972	17.7721	99.46%	
VR30 K1		-	13.1039	17.6271	17.6699	100.95%	
VR30 L1		-	13.1256	17.2390	17.2893	101.22%	
VR31 A1		-	13.1452	17.0154	17.1665	103.90%	
VR31 B1		-	13.1833	17.4122	17.4960	101.98%	
VR31 C1		-	13.1045	18.2654	18.3876	102.37%	
VR31 D1		-	13.1074	18.1418	18.3490	104.12%	
VR31 E1		-	13.1775	17.6402	17.8336	104.33%	
VR31 F1		-	13.1765	18.0827	18.2781	103.98%	
VR31 G1		-	13.1175	18.2475	18.3839	102.66%	
VR31 H1		-	13.1499	17.3932	17.5268	103.15%	

① 11-12-12 Ⓦ

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst Ⓦ / CWC ① ~~RH~~ Ⓑ Date 11-12-12 18:53

Sample Idenification		IC Test	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID		Tare	Wet	70 °C		
Blank			13.1683	Ø	13.1685		
VR30A		–	13.2074	17.3347	17.0939		
A' dp		–	13.1083	17.2122	17.1241		
A' TP		–	13.1459	17.3641	16.9674		
B'		–	13.1293	17.6899	17.7141		
C'		–	13.0490	17.5506	17.6279		
D'		–	13.1461	18.2240	18.1329		
E'		–	13.0436	17.9537	18.0756		
F'		–	13.1430	18.2113	18.2997		
G'		–	13.0864	18.9620	19.0435		
H'		–	13.1554	17.5039	17.5577		
I'		–	13.1993	17.0175	17.0326		
J'		–	13.1696	17.7972	17.7721		
K'		–	13.1039	17.6271	17.6699		
L'		–	13.1256	17.2390	17.2893		
VR31A'		–	13.1452	17.0154	17.1665		
B'		–	13.1833	17.4122	17.4960		
C'		–	13.1045	18.2654	18.3876		
D'		–	13.1074	18.1418	18.3490		
~~E~~ E'		–	13.1775	~~17.64~~ ①	17.6402	17.8336	
F'		–	13.1765	18.0827	18.2781		
G'		–	13.1175	18.2475	18.3839		
H'		–	13.1499	17.3932	17.5268		

11-12-12 Ⓦ

W

11-27-12

TOC Solids Prep Log

DATE: 11/12/12 (C)

ANALYST: KE / CDE 18:53

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID:

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1153		13.1158	0.5 mg	
VR31 I 1		-	13.1737	17.4428	17.6319	104.43%	
VR31 I 1 dup		-	13.1345	17.3369	17.5177	104.30%	RPD = 0.12%
VR31 I 1 trip		-	13.0908	17.6135	17.7876	103.85%	RSD = 0.29%
VR31 J 1		-	13.1292	17.4501	17.6299	104.16%	
VR31 K1		-	13.1564	17.8954	18.0470	103.20%	
VR31 L1		-	13.0951	18.0053	18.1395	102.73%	
VR32 A1		-	13.0688	18.2735	18.3952	102.34%	
VR32 B1		-	13.1717	18.2517	18.3832	102.59%	
VR32 C1		-	13.0896	17.4152	17.5694	103.56%	
VR32 D1		-	13.0916	17.8237	17.9536	102.75%	
VR32 E1		-	13.2227	17.5283	17.6810	103.55%	
VR32 F1		-	13.0734	18.6614	18.7925	102.35%	
VR32 G1		-	13.1945	18.2978	18.4987	103.94%	
VR32 H1		-	13.1680	18.8098	18.9960	103.30%	
VR32 I 1		-	13.1722	17.6422	18.8193	126.33%	
VR32 J 1		-	13.1535	19.0673	19.3083	104.08%	
VR32 K1		-	13.1641	17.8261	17.9852	103.41%	
VR32 L1		-	13.0975	16.6020	16.6963	102.69%	
VR33 A1		-	13.1663	16.0146	16.1164	103.57%	
VR33 B1		-	13.1063	17.1928	17.3254	103.24%	
VR33 C1		-	13.1338	16.5006	16.5988	102.92%	
VR33 D1		-	13.1746	17.5812	17.7203	103.16%	

① 11-12-12 (W)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) / [illegible] (C) Date 11-12-12 18:53

Sample Idenification		IC Test	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID		Tare	Wet	70 °C		
Blank		①	13.1153	∅	13.1158		
VR31 I'		—	13.1737	17.4428	17.6319		
I'D		—	13.1345	17.3369	17.5177		
I'TP		—	13.0908	17.6135	17.7876		
J'		—	13.1292	17.4501	17.6299		
K'		—	13.1564	17.8954	18.0470		
L'		—	13.0981	18.0053	18.1395		
VR32 A'		—	13.0688	18.2735	18.3952		
B'		—	13.1717	18.2517	18.3832		
C'		—	13.0896	17.4152	17.5694		
D'		—	13.0916	17.8237	17.9536		
E'		—	13.2227	17.5283	17.6810		
F'		—	13.0734	18.6614	18.7925		
G'		—	13.1945	18.2978	18.4987		
H'		—	13.1680	18.8098	18.9960		
I'		—	13.1722	18.6422	~~18.8562~~	18.8193	x
J'		—	13.1535	19.0673	19.3083		
K'		—	13.1641	17.8261	17.9852		
L'		—	13.0975	16.6020	16.6963		
VR33 A'		—	13.1663	16.0146	16.1164		
B'		—	13.1063	17.1928	17.3254		
C'		—	13.1338	16.5006	16.5988		
D'		—	13.1746	17.5812	17.7203		

11-12-12 (C)

W
11-27-12

TOC, Solids Data Analysis

DATE: 11/21/2012
ANALYST: KE 10:18

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 11/13/2012 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00130-01 *Curve Date:* 11/13/12
CalFact: 1.339E+05 *intercept:* 163305 *r2 :* 0.99851
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard Source: *ERA# 0409-12-01* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	1055	1,055	*105.50%*
Blank				1.00		40.0	-9.9	-10	*Blank OK*
NIST 1941B				1.00		2.1	28909	28,909	*96.69%*
VR31 I 1				1.00		0.8	28732	28,732	*Range OK!*
~~VR31 I 1 dup~~				~~1.00~~		~~0.9~~	~~18345~~	~~18,345~~	*~~RPD=44.1%~~*
VR31 I 1 dup				1.00		0.9	26633	26,633	*RPD=7.6%*
VR31 I 1 trp				1.00		0.9	22670	22,670	*RSD=11.8%*
VR31 I 1 ms				1.00	10	0.8	67827	67,827	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.8*	*mg samp=*	*31,250*	*ppm*		*125%*	
VR31 G1				1.00		1.2	13791	13,791	*Range OK!*
VR31 H1				1.00		0.9	24141	24,141	*Range OK!*
VR31 J 1				1.00		1.0	36499	36,499	*Range OK!*
VR31 K1				1.00		0.9	34431	34,431	*Range OK!*
CCV				1.00		40.0	955	955	*95.50%*
Blank				1.00		40.0	-24.92	-25	*Blank OK*
VR31 L1				1.00		0.8	62455	62,455	*Range OK!*
VR32 A1				1.00		1.0	20383	20,383	*Range OK!*
VR32 B1				1.00		0.9	31292	31,292	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
VR32 C1				1.00		1.3	16551	16,551	*Range OK!*
VR32 D1				1.00		0.9	18772	18,772	*Range OK!*
VR32 E1				1.00		1.2	22760	22,760	*Range OK!*
VR32 F1				1.00		1.1	23129	23,129	*Range OK!*
VR32 G1				1.00		0.9	22316	22,316	*Range OK!*
VR32 H1				1.00		1.4	16084	16,084	*Range OK!*
VR32 I 1				1.00		1.3	7714	7,714	*Range OK!*
CCV				1.00		40.0	1007	1,007	*100.70%*
Blank				1.00		40.0	-29.71	-30	*Blank OK*
VR32 J 1				1.00		1.4	4861	4,861	*Low Scale*
VR32 K1				1.00		1.1	20658	20,658	*Range OK!*
VR32 L1				1.00		0.8	64168	64,168	*Range OK!*
~~NIST 1941B~~			-	~~1.00~~		~~1.8~~	~~23737~~	~~23,737~~	~~*79.39%*~~
NIST 1941B				1.00		2.2	27219	27,219	*91.03%*
CCV				1.00		40.0	1054	1,054	*105.40%*
Blank				1.00		40.0	-26.11	-26	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 11-21-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(W)
Calibration:	ARI – U0128-03	5000	Date:	10:18
Verification:	ERA – 0409-12-01	5000 to 1000 for CVS	Time:	11-21-12
SRM:	NBS – (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			2.1			
VR31 I'			0.8			
dI'			0.9			
dI'			0.8			
MD I'			0.9			
MS I'			0.8	2500	10	
G'			1.2			
H'			0.9			
J'			1.0			
K'			0.9			
CCV			40			
CCB			40			
VR31 L'			0.8			
VR32 A'			1.0			
B'			0.9			
C'			1.3			
D'			0.9			
E'			1.2			
F'			1.1			
G'			0.9			
H'			1.4			
I'			1.3			
CCV			40			
CCB			40			
VR32 J'			1.4			
K'			1.1			
L'			0.8			
NBS 1941 B			1.8 / 2.2			
CCV			40			
CCB			40			

11-21-12 @

Detailed Analysis Report Print Date/Time: 2012/11/21 16:43:45

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211020
Timestamp: 2012/11/21 10:24
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1055.2404	42.2096	5815052	12.228	13.221	156

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211027
Timestamp: 2012/11/21 10:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-9.8957	-0.3958	110305	11.916	12.915	55

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211032
Timestamp: 2012/11/21 10:38
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28909.3262	60.7096	8292146	11.667	12.666	221

Sample ID: VR31 I 1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211042
Timestamp: 2012/11/21 10:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28731.7188	22.9854	3077676	11.689	12.686	124

Sample ID: VR31 I 1
Method: Boat Sampler D
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211049
Timestamp: 2012/11/21 10:51
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18344.5449	16.5101	2210654	11.488	12.488	117

Sample ID: VR31 I 1 DUP
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211118
Timestamp: 2012/11/21 11:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26632.8574	21.3063	2852851	11.533	12.530	131

Sample ID: VR31 I 1 ~~DUP~~ TRIP
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211128
Timestamp: 2012/11/21 11:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22669.7188	20.4027	2731870	11.854	12.852	126

Sample ID: VR31 I 1 MS
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211135
Timestamp: 2012/11/21 11:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	67827.1016	54.2617	7265485	11.906	12.905	155

Sample ID: VR31 G1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211205
Timestamp: 2012/11/21 12:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13791.1533	16.5494	2215916	11.743	12.743	124

Sample ID: VR31 H1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211211
Timestamp: 2012/11/21 12:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24141.3711	21.7272	2909215	11.726	12.724	128

Sample ID: VR31
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211218
Timestamp: 2012/11/21 12:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36499.1680	36.4992	4887135	11.890	12.887	158

Sample ID: VR31
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211226
Timestamp: 2012/11/21 12:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34430.5547	30.9875	4149138	12.094	13.087	139

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211239
Timestamp: 2012/11/21 12:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	955.3807	38.2152	5280216	12.205	13.203	144

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211246
Timestamp: 2012/11/21 12:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-24.9204	-0.9968	29835	12.322	12.291	120

Last Message: Low Sample Detected

Sample ID: VR31 L1 Mode: TOC
Method: Boat Sampler Filename: 11211301
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	62455.1719	49.9641	6690056	12.012	13.011	165

Sample ID: VR32 A1 Mode: TOC
Method: Boat Sampler Filename: 11211308
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20383.0293	20.3830	2729230	12.399	13.394	121

Sample ID: VR32 B1 Mode: TOC
Method: Boat Sampler Filename: 11211318
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31292.3750	28.1631	3770964	12.151	13.148	138

Sample ID: VR32 C1 Mode: TOC
Method: Boat Sampler Filename: 11211324
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16550.9199	21.5162	2880957	12.138	13.137	133

Sample ID: VR32 D1 Mode: TOC
Method: Boat Sampler Filename: 11211338
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:43
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18772.1562	16.8949	2262185	12.248	13.245	121

Sample ID: VR32 E1 Mode: TOC
Method: Boat Sampler Filename: 11211439
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 14:43
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22760.0742	27.3121	3657011	12.342	13.342	140

Sample ID: VR32 F1 Mode: TOC
Method: Boat Sampler Filename: 11211450
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 14:58
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23129.2285	25.4422	3406632	12.468	13.465	126

Sample ID: VR32 G1 Mode: TOC
Method: Boat Sampler Filename: 11211500
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22315.9551	20.0844	2689239	12.288	13.285	125

Sample ID: VR32 H1 Mode: TOC
Method: Boat Sampler Filename: 11211508
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16083.7568	22.5173	3014997	12.574	13.573	131

Sample ID: VR32 J1 Mode: TOC
Method: Boat Sampler Filename: 11211518
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7714.3818	10.0287	1342814	12.280	13.278	106

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11211524
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:28
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1007.3592	40.2944	5558606	12.235	13.233	154

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11211540
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:43
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-29.7067	-1.1883	4200	12.328	12.300	120

Last Message: Low Sample Detected

Sample ID: VR32 J 1 Mode: TOC
Method: Boat Sampler Filename: 11211546
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:49
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4861.4844	6.8061	911314	12.177	13.176	86

Sample ID: VR32 K1 Mode: TOC
Method: Boat Sampler Filename: 11211551
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:55
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20657.8164	22.7236	3042625	12.134	13.133	129

Sample ID: VR32 L1 | Mode: TOC
Method: Boat Sampler | Filename: 11211608
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:13
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	64167.5039	51.3340	6873477	12.390	13.389	162

Sample ID: NBS 1941B | Mode: TOC
Method: Boat Sampler | Filename: 11211619
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:24
Operator ID: TRINA | Sample Type: Cal. Verification

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Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23736.5566	42.7238	5884169	12.479	13.477	210

Last Message: Out of Calibration

Sample ID: NBS 1941B | Mode: TOC
Method: Boat Sampler | Filename: 11211628
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:33
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27218.5254	59.8808	8181168	12.674	13.672	212

Sample ID: ICV/CCV BOAT | Mode: TOC
Method: Boat Sampler | Filename: 11211635
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:38
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1053.7358	42.1494	5806995	12.503	13.502	153

Sample ID: ICB/CCB BOAT | Mode: TOC
Method: Boat Sampler | Filename: 11211639
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:42
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-26.1115	-1.0445	23455	12.560	12.527	120

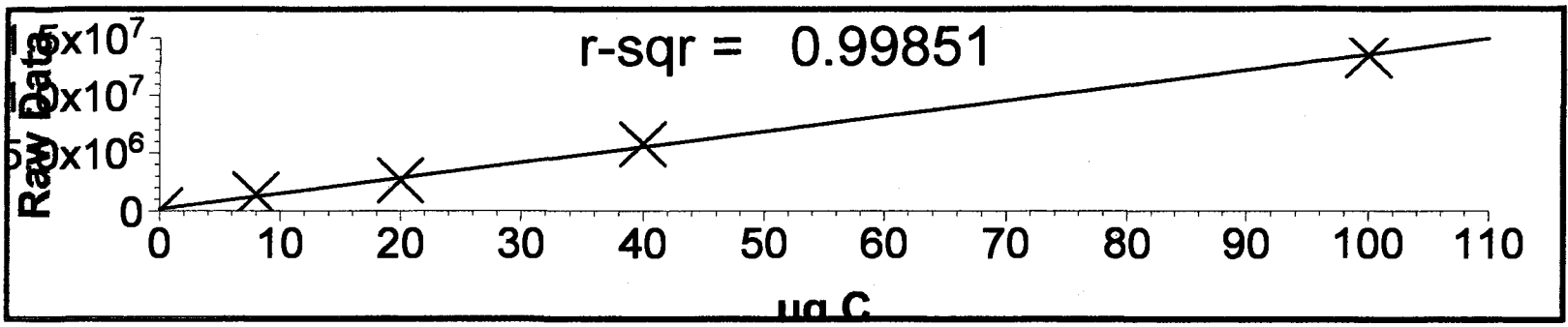
Last Message: Low Sample Detected

11-13-12 (W)

Calibration Report Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID: 11132012 BOAT CAL
Created: 2012/11/13 17:59
Calibration Factor (m): 1.339e+05
Y Intercept (b): 163305
r-squared: 0.99851

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46


r-sqr = 0.99851
Raw Data
6x10^7
4x10^7
2x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/11/13 18:00:30

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131156
Timestamp: 2012/11/13 12:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 34152 Std Dev: 13649 RSD: 39.96

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131238
Timestamp: 2012/11/13 13:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

<<<Statistics>>> Mean: 1702454 Std Dev: 978717 RSD: 57.49

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131440
Timestamp: 2012/11/13 15:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

<<<Statistics>>> Mean: 2675582 Std Dev: 260489 RSD: 9.74

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131526
Timestamp: 2012/11/13 15:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

<<<Statistics>>> Mean: 5317643 Std Dev: 38175 RSD: 0.72

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131539
Timestamp: 2012/11/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

<<<Statistics>>> Mean: 1402526 Std Dev: 274468 RSD: 19.57

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131603
Timestamp: 2012/11/13 16:30
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131635
Timestamp: 2012/11/13 16:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131653
Timestamp: 2012/11/13 17:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131715
Timestamp: 2012/11/13 17:46
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31

W
11-21-12

TOC, Solids Data Analysis

DATE: 11/19/2012

Instrument: Apollo 1 — ANALYST: KE 11:26

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C* — Balance ID:

Calibration Data

Cal Curve ID:	11/13/2012			*Conc:*	5,000 *ppm*
Calibration Curve Standard:	00130-01			*Curve Date:*	11/13/12
CalFact:	*1.339E+05*	*intercept:*	163305	*r2 :*	0.99851
Curve Range (ppm)	200	*to*	2,500		
Curve Range (µgC):	8	*to*	100	*40 µL injections of designated standard*	

Verification Standard

Source: *ERA# 0409-12-01* — *Conc:* 5,000 *ppm*

dilution : 10 *mL to* 50 — 1,000 *ppm*

Standard Reference Material

Source: *NIST 8704* — *Conc:* 33,510 *ppm*

Source: *NIST 1941B* — *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
39.1	36.9	40.7				38.9	5.0%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	995	995	*99.50%*
Blank				1.00		40.0	-25.06	-25	*Blank OK*
NIST 1941B				1.00		1.8	28726	28,726	*96.07%*
~~VR30 A1~~			-	~~1.00~~		~~0.9~~	~~72036~~	~~72,036~~	*~~Range OK!~~*
Silica Blanks 1				1.00		46.4	39.09	39	*Low Scale*
Silica Blanks 2				1.00		49.4	36.89	37	*Low Scale*
Silica Blanks 3				1.00		47.9	40.74	41	*Low Scale*
~~VR30 A1~~	~~10.8~~	~~107.7~~	~~89.97%~~	~~9.97~~		~~1.8~~	~~11758~~	~~116,904~~	*~~Range OK!~~*
VR30 A1 dup	10.8	106.6	89.87%	9.87		2.0	7740	76,052	*RPD=15.4%*
VR30 A1	10.8	107.7	89.97%	9.97		1.8	8933	88,733	*Range OK!*
VR30 A1 trp	10.6	105.7	89.97%	9.97		1.9	7484	74,279	*RSD=9.9%*
VR30 A1 ms	10.8	107.7	89.97%	9.97	10	1.8	21817	217,215	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*138,503*	*ppm*		*93%*	
CCV				1.00		40.0	1027	1,027	*102.70%*
Blank				1.00		40.0	-22.7	-23	*Blank OK*
VR30 B1	10.8	107.3	89.93%	9.94		2.0	5247	51,782	*Range OK!*
VR30 C1	11.6	115.2	89.93%	9.93		1.8	5576	55,028	*Range OK!*
VR30 D1				1.00		1.3	37043	37,043	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
VR30 E1				1.00		1.0	23695	23,695	*Range OK!*
VR30 F1				1.00		1.0	22632	22,632	*Range OK!*
VR30 G1				1.00		1.3	14198	14,198	*Range OK!*
VR30 H1				1.00		1.4	27740	27,740	*Range OK!*
VR30 I 1	17.4	167.9	89.64%	9.65		2.1	8186	78,654	*Range OK!*
VR30 J 1				1.00		1.1	44437	44,437	*Range OK!*
VR30 K1				1.00		0.9	46608	46,608	*Range OK!*
CCV				1.00		40.0	1030	1,030	*103.00%*
Blank				1.00		40.0	-19.56	-20	*Blank OK*
VR30 L1				1.00		0.9	74306	74,306	*Range OK!*
VR31 A1				1.00		0.9	36516	36,516	*Range OK!*
VR31 B1				1.00		0.8	31963	31,963	*Range OK!*
VR31 C1				1.00		1.3	22442	22,442	*Range OK!*
VR31 D1				1.00		1.4	13252	13,252	*Range OK!*
VR31 E1				1.00		1.4	19815	19,815	*Range OK!*
VR31 F1				1.00		0.9	18796	18,796	*Range OK!*
NIST 1941B				1.00		1.9	27919	27,919	*93.37%*
CCV				1.00		40.0	990	990	*99.00%*
Blank				1.00		40.0	-25.66	-26	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

① 11-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(W)
Calibration:	ARI - 60128-03	5000	Date:	11-19-12
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS	Time:	11:26
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B1464/4145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941B			1.8			
VR30 A'			0.9			
SB 1			~~4.0~~ ①	46.4		
2			49.4			
3			49.9			
VR30 A'	10.8	107.7	~~1.8~~ ~~1.8~~			
DPA'	10.8	106.6	~~2.8~~ ~~1.8~~ 2.0			
A	10.8	~~105.7~~ ②	1.8			
DPA'	10.8	107.7	1.9			
MSA'	10.8	107.7	1.8	2500	10	
CCV			40			
CCB			40			
VR30 B'	10.8	107.3	2.0			
C'	11.6	115.2	1.8			
D'			1.3			
E'			1.0			
F'			1.0			
G'			1.3			
H'			1.4			
I'	17.4	167.9	2.1			
J'			1.1			
K'			0.9			
CCV			40			
CCB			40			
VR30 L'			0.9			
VR31 A'			0.9			
B'			0.8			
C'			1.3			
D'			1.4			
E'			1.4			

② 107.7 11-19-12 (W)

(1) 11-19-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler		
Standards:	Source		Conc (ppm)		Analyst:	(W)
Calibration:	ARI – 00128-03		5000		Date:	11-19-21
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS		Time:	11:26
SRM:	NBS – 1941b or 8704		Method: PSEP 1986-MOD		Balance ID	B146454145
Sample Sequence:						

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
VR31 F1			0.9			
NBS 1941B			1.9			
CCV			40			
CCB			40			

11-19-12 (W)

11-19-12 (W)

Detailed Analysis Report Print Date/Time: 2012/11/19 18:18:42

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191125
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:28
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	994.6886	39.7875	5490744	7.950	8.949	149

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191137
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:41
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-25.0553	-1.0022	29112	7.656	7.497	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11191148
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 11:56
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28726.4668	51.7076	7086811	7.311	8.307	208

Sample ID: VR30 A1 Mode: TOC
Method: Boat Sampler Filename: 11191208
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:12
Operator ID: TRINA Sample Type: Sample

11-19-12 (W)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	72035.9688	64.8324	8680871	6.760	7.757	162

Sample ID: Silica Blank 1 Mode: TOC
Method: Boat Sampler Filename: 11191222
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:24
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	39.0902	1.8138	242861	6.616	7.610	63

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 11191233
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:35
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36.8937	1.8225	244034	6.606	7.600	62

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 11191245
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:47
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	40.7419	1.9515	261305	6.519	7.514	61

11-19-12

Sample ID: VR30 A1 Mode: TOC
Method: Boat Sampler Filename: 11191255
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 12:58
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11758.1504	21.1647	2833889	6.264	7.263	129

Sample ID: VR30 A1 DUP Mode: TOC
Method: Boat Sampler Filename: 11191309
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7739.8589	15.4797	2072690	6.120	7.119	117

Sample ID: VR30 A1 [redacted] Mode: TOC
Method: Boat Sampler Filename: 11191318
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8933.0498	16.0795	2152998	6.064	7.064	115

Sample ID: VR30 A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 11191328
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:31
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7483.5659	14.2188	1903854	5.973	6.971	118

Sample ID: VR30 A1 MS Mode: TOC
Method: Boat Sampler Filename: 11191335
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:39
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21816.9043	39.2704	5258199	6.125	7.124	137

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191348
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 13:52
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1026.7412	41.0696	5662414	5.843	6.839	149

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191359
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 14:00
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-22.6996	-0.9080	41729	6.015	7.012	44

Sample ID: VR30 B1 Mode: TOC
Method: Boat Sampler Filename: 11191438
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 14:41
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5247.3013	10.4946	1405197	5.899	6.898	93

Sample ID: VR30 B1 Mode: TOC
Method: Boat Sampler Filename: 11191505
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:08
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5576.4346	10.0376	1344004	6.056	7.056	97

Sample ID: VR30 D1 Mode: TOC
Method: Boat Sampler Filename: 11191511
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37042.5742	48.1553	6447864	5.974	6.970	150

Sample ID: VR30 E1 Mode: TOC
Method: Boat Sampler Filename: 11191520
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:23
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23695.1934	23.6952	3172719	5.952	6.952	125

Sample ID: VR30 F1 Mode: TOC
Method: Boat Sampler Filename: 11191529
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:33
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22632.4707	22.6325	3030423	5.865	6.863	124

Sample ID: VR30 G1 Mode: TOC
Method: Boat Sampler Filename: 11191537
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:40
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14197.8115	18.4572	2471361	5.818	6.817	116

Sample ID: VR30 H1 Mode: TOC
Method: Boat Sampler Filename: 11191544
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 15:52
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27740.2910	38.8364	5200084	5.798	6.794	141

Sample ID: VR30 I 1 Mode: TOC
Method: Boat Sampler Filename: 11191557
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8186.2295	17.1911	2301837	5.717	6.715	112

Sample ID: VR30 J1 Mode: TOC
Method: Boat Sampler Filename: 11191617
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	44436.9062	48.8806	6544973	5.609	6.607	154

Sample ID: VR30 K1 Mode: TOC
Method: Boat Sampler Filename: 11191624
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	46608.0195	41.9472	5616613	5.656	6.655	146

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191632
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:37
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1030.3511	41.2140	5681749	5.673	6.669	151

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11191640
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:42
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-19.5554	-0.7822	58569	5.721	6.719	52

Sample ID: VR30 A1 Mode: TOC
Method: Boat Sampler Filename: 11191647
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:52
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	74305.9609	66.8754	8954422	5.520	6.517	179

Sample ID: VR31 A1 Mode: TOC
Method: Boat Sampler Filename: 11191656
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 16:59
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36516.0469	32.8644	4400455	5.618	6.615	130

VR31 : 00261

Sample ID: VR31 B1 Mode: TOC
Method: Boat Sampler Filename: 11191703
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:07
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31962.8496	25.5703	3423788	5.557	6.555	127

Sample ID: VR31 C1 Mode: TOC
Method: Boat Sampler Filename: 11191711
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22442.2266	29.1749	3906436	5.557	6.552	137

Sample ID: VR31 D1 Mode: TOC
Method: Boat Sampler Filename: 11191725
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:28
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13252.1279	18.5530	2484191	5.643	6.641	116

Sample ID: VR31 E1 Mode: TOC
Method: Boat Sampler Filename: 11191734
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:37
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19815.1465	27.7412	3714468	5.757	6.755	127

Sample ID: VR31 F1 Mode: TOC
Method: Boat Sampler Filename: 11191746
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:50
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18796.1211	16.9165	2265072	5.750	6.747	117

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11191754
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 17:59
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27919.2168	53.0465	7266082	5.781	6.780	219

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11191803
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/19 18:10
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	989.5170	39.5807	5463046	5.798	6.796	149

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11191812
Timestamp: 2012/11/19 18:17
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-25.6550	-1.0262	25900	5.805	5.834	120

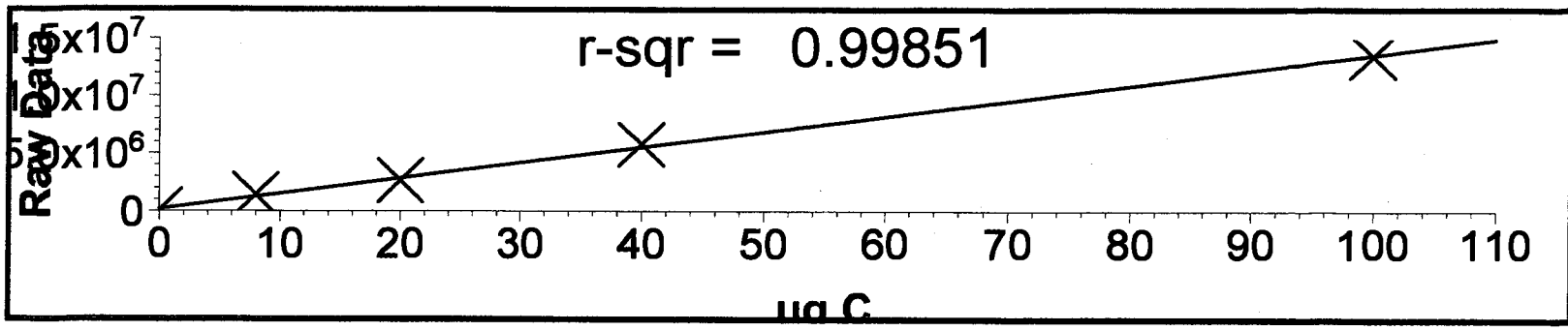
Last Message: Low Sample Detected

11-13-12 (W)

Calibration Report Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID: 11132012 BOAT CAL
Created: 2012/11/13 17:59
Calibration Factor (m): 1.339e+05
Y Intercept (b): 163305
r-squared: 0.99851

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46


r-sqr = 0.99851
Raw Data
5x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/11/13 18:00:30

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131156
Timestamp: 2012/11/13 12:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 34152 Std Dev: 13649 RSD: 39.96

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131238
Timestamp: 2012/11/13 13:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

<<<Statistics>>> Mean: 1702454 Std Dev: 978717 RSD: 57.49

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131440
Timestamp: 2012/11/13 15:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

<<<Statistics>>> Mean: 2675582 Std Dev: 260489 RSD: 9.74

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131526
Timestamp: 2012/11/13 15:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

<<<Statistics>>> Mean: 5317643 Std Dev: 38175 RSD: 0.72

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131539
Timestamp: 2012/11/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

<<<Statistics>>> Mean: 1402526 Std Dev: 274468 RSD: 19.57

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131603
Timestamp: 2012/11/13 16:30
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131635
Timestamp: 2012/11/13 16:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131653
Timestamp: 2012/11/13 17:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11131715
Timestamp: 2012/11/13 17:46
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR31

ANALYTICAL
RESOURCES
INCORPORATED

ANALYST NOTES - GeoTech

ARI Job No: VR31 Client Name: Hart Crowser

Parameter: #10 screen Client Project: Upper Columbia

☐ Job OK, no corrective action required

Set up Date 11/8/12

Air Dry Start: 15:15 11/8/12

#10 SIEVE 11/09/12

Analyst: gc Date Completed: 11/12/12

Total Solids

ARI Job ID: VR31

Solids Data Entry Report Checked by: NB Date: 11/14/12
Date: 11/14/12 Data Analyst: DM

Solids Determination performed on 11/13/12 by DM

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
VR31	A	SA1-Field Duplicate	0.990	10.520	10.184	96.47
VR31	B	SA2-1C	0.990	10.158	9.755	95.60
VR31	C	SA2-2C	0.978	10.576	10.285	96.97
VR31	D	SA2-2P-1(0 to 3	1.006	10.721	10.580	98.55
VR31	E	SA2-2P-2(3 to 6	0.986	10.770	10.559	97.84
VR31	F	SA2-2P-3(6 to 12	1.038	10.355	10.178	98.10
VR31	G	SA2-2P-4(12 to 24	0.973	10.224	9.963	97.18
VR31	H	SA2-3C	1.006	10.218	9.947	97.06
VR31	I	SA2-4C	0.967	10.432	10.247	98.05
VR31	J	SA2-5C	0.980	10.629	10.457	98.22
VR31	K	SA2-6C	0.984	10.601	10.391	97.82
VR31	L	SA2-7C	1.011	10.797	10.538	97.35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 11-13-12 Time: 1125 Temp: 101°C Analyst: DM

Removed from Oven: Date: 11-14-12 Time: 0725 Temp: 100°C Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
VR31 A	0.990	10.520	10.184	—	✓
" B	0.990	10.158	9.755	—	✓
" C	0.978	10.576	10.285	—	✓
" D	1.006	10.721	10.580	—	✓
" E	0.986	10.770	10.559	—	✓
" F	1.038	10.355	10.178	—	✓
" G	0.973	10.224	9.963	—	✓
" H	1.006	10.218	9.947	—	✓
" I	0.967	10.432	10.247	—	✓
" J	0.980	10.629	10.457	—	✓
" K	0.984	10.601	10.391	—	✓
" L	1.011	10.797	10.538	—	✓
		11-13-12 DM			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

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General Chemistry Analysis			
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Geotechnical Analysis	NA	NA	- PREP ONLY
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Total Solids			
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Signature

December-06-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

December 6, 2012

Steve Hughes
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Upper Columbia 17800-36
ARI Job No. VR32

Dear Steve:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: eFile VR32

KFB/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VR32

Sample Custody Record

VR32 3 of 4

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 17800-36 LAB NUMBER

PROJECT NAME UPPER COLUMBIA

HART CROWSER CONTACT STEVE HUGHES

SAMPLED BY: PRC, SMF, WDM, KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	Metals*	TOC	pH (EPA 9045)	Total Solids (SM2540)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	SA2-8C		10/31/12	1128	SOIL	X	X	X	X	1	
	SA2-Field Duplicate		10/31/12	1215						1	
	SA3-1C		10/31/12	1613						1	
	SA3-2C		11/1/12	0935						1	
	SA3-3C			1629						1	
	SA3-4C			1025						1	
	SA3-4P-1 (0 to 3" depth)			1050						1	
	SA3-4P-2 (3 to 6" depth)			1055						1	
	SA3-4P-3 (6 to 12" depth)			1100						1	
	SA3-4P-4 (12 to 24" depth)			1105						1	
	SA3-5C			0902						1	
	SA3-6C			1254						1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Suzanne Fawl	11/7/12	SIGNATURE: Chris Atwell	11-7-12
PRINT NAME: Suzanne Fawl	TIME	PRINT NAME:	TIME
COMPANY: Hart Crowser	0800	COMPANY: ARI	1130
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* Metals - Ag, Al, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, Pb, K, Na, Sb, Sc, Ti, V, Zn (Method 6010B/6020) Hg by EPA 7471A

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

12 TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE _____
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐48 HOURS ☒STANDARD
☐72 HOURS OTHER _____

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Hart Crowser

Project Name Upper Columbia

COC No(s) _____ (NA)

Delivered by Fed-Ex UPS Courier Hand Delivered Other _____

Assigned ARI Job No VR32

Tracking No _____ NA

Preliminary Examination Phase.

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry)	2.9 4.7 5.1 3.8	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID# 90877952	

Cooler Accepted by: CA Date: 11-07-12 Time: 1130

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI: (NA) YES Date/Time _____ Equipment _____ Split by _____

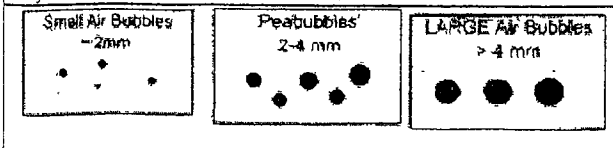
Samples Logged by: JM Date: 11/7/12 Time: 1321

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR32

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR32
December 6, 2012

Sample Receipt:

Please find enclosed the original chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted twelve soil samples in good condition on November 7, 2012. The samples were received with cooler temperatures between 2.9 and 5.1°C. Please see the Cooler Receipt Form for further details.

Total Metals by 200.8, 6010C and 7471A

The samples were digested on 11/13/12 and analyzed between 11/15/12 and 11/27/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes were within method acceptance criteria.

Samples: Small amounts of aluminum, iron and manganese were detected in the 11/19/12 continuing calibration blank (CCB) that bracketed the analyses of these samples. Another CCB was immediately analyzed. No target elements were detected in the re-analysis of the CCB. No further corrective actions were taken.

Method Blank(s): The method blank was free of contamination.

LCS: All percent recoveries were within control limits.

Matrix spike/Sample Duplicate/RPD: The percent recoveries for aluminum, antimony, calcium, iron, and zinc were not within control limits for the matrix spike associated with sample SA2-8C. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that the sample matrix was the cause of the poor MS recoveries. No corrective actions were taken.

All RPDs were within control limits.

Conventional Chemistry Parameters

The samples were analyzed between 11/12/12 and 11/21/12 within the method recommended holding times.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: There were no anomalies with these samples.

Method Blank(s): The method blanks were free of contamination.

SRM/ LCS/ Sample Replicates: All percent recoveries and RPDs were in control.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Hart Crowser, Inc.	**ARI Job No.:** VR32
Client Project: Upper Columbia	**Client Project No.:** 17800-36

Case Narrative

1. Twelve samples were received on November 7, 2012, and were in good condition.
2. The samples were submitted for separation of the less than 2mm material.
3. The samples were each placed in a clean tare and air-dried.
4. The samples were separated into two size fractions using a decontaminated, stainless steel #10 (2mm) sieve and sieve pan.
5. After separation, both size fractions were delivered to sample receiving for distribution.
6. There were no further anomalies in the samples or test method.

Released by: _____ Date: 11/13/12
Title: *Geotechnical Division Manager*

Reviewed by: _____ Date: 11-14-2012
Title: *Lead Technician*

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR32
Client: Hart Crowser Inc.
Project Event: 17800-36
Project Name: Upper Columbia

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SA2-8C	VR32A	12-22189	Soil	10/31/12 11:28	11/07/12 11:30
2.	SA2-Field Duplicate	VR32B	12-22190	Soil	10/31/12 12:15	11/07/12 11:30
3.	SA3-1C	VR32C	12-22191	Soil	10/31/12 16:13	11/07/12 11:30
4.	SA3-2C	VR32D	12-22192	Soil	11/01/12 09:35	11/07/12 11:30
5.	SA3-3C	VR32E	12-22193	Soil	11/01/12 16:29	11/07/12 11:30
6.	SA3-4C	VR32F	12-22194	Soil	11/01/12 10:25	11/07/12 11:30
7.	SA3-4P-1(0 to 3" depth)	VR32G	12-22195	Soil	11/01/12 10:50	11/07/12 11:30
8.	SA3-4P-2(3 to 6" depth)	VR32H	12-22196	Soil	11/01/12 10:55	11/07/12 11:30
9.	SA3-4P-3(6 to 12" depth)	VR32I	12-22197	Soil	11/01/12 11:00	11/07/12 11:30
10.	SA3-4P-4(12 to 24" depth	VR32J	12-22198	Soil	11/01/12 11:05	11/07/12 11:30
11.	SA3-5C	VR32K	12-22199	Soil	11/01/12 09:02	11/07/12 11:30
12.	SA3-6C	VR32L	12-22200	Soil	11/01/12 12:54	11/07/12 11:30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid, a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A

Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[4]	Solids[3]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[5]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[5]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) ARI has no accreditation for these elements.

Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$
(6) ARI does not analyze for Silicon in solids or tissue samples

Analytical Resources,Incorporated
Analytical Chemists and Consultants

MDL/RL Summary for Conventional Analyses

MDL's and reporting limits are updated periodically. Assure you are using ARI's current detection limits by downloading the files at the time of use: http://www.arilabs.com/portal/downloads/ARI-MDLs.zip

					RL (ppm unless noted)	
Analyte	**ARI SOP**	**MDL Date**	**Spike Level (ppm)**	**MDL (ppm)**	**Water**	**Soil [4]**
Alkalinity	604S	8/11/11	10	0.37	2.0	NA
Ammonia (Auto. Phenate)	615S	8/10/11	0.01	0.021	0.04	0.1
Ammonia (ISE)	616S	1/8/09	0.5	0.122	0.1	5.0
BOD	605S			NA	1.0	NA
Cation Exchange Capacity	607S			NA	NA	1 meq/100g
Chloride	612S	8/10/11	0.50	0.049	1.0	10.0
Chlorophyll a	608S			NA	1.0	NA
Chromium, Hexavalent	614S	8/10/11	0.050	0.050	0.04	0.1
COD	609S	8/10/11	25	9.81	20	NA
Coliform (total, fecal)	628S			NA	1 CFU/100 mL	NA
Color	610S			NA	5 Pt-Co Units	NA
Conductivity - Orion Meter	611S	1/9/09	3 µS	0.28 µS	1.0 µS	1.0 µS
Cyanide	601S	8/10/11	0.02	0.0025	0.005	0.25
Cyanide WAD	601S	1/9/09	0.005	0.001	0.005	0.25
Dissolved Oxygen	632S			NA	0.1	NA
Fluoride (ISE)	623S	1/9/09	0.5	0.20	0.1	1.0
Hardness	626S			NA	0.33 [1]	NA
Iron (II), Ferrous	600S	1/9/09	0.050	0.003	0.04	NA
Nitrate	617S			NA	0.01	0.1
Nitrite	617S	8/10/11	0.015	0.009	0.019	0.1
Nitrate+Nitrite	617S	8/10/11	0.015	0.014	0.028	0.1
HEM Method 1664	648S	8/10/11	12.1	2.29	5.0	500 [2]
SGT-HEM Method 1664	648S	8/10/11	4.0	2.16	5.0	500 [2]
pH	618S			NA	0.01 Units	0.05 Units
Phenols	633S	12/30/08	0.06	0.035	0.04	0.4
Phosphorous (Total)	631S	8/10/11	0.05	0.018	0.036	0.4
Phosphorous (Ortho)	631S	8/10/11	0.01	0.0035	0.0069	0.04
Salinity	635S			NA	0.1 (g/Kg)	NA

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MDL/RL Summary for Conventional Analyses

MDL's and reporting limits are updated periodically. Assure you are using ARI's current detection limits by downloading the files at the time of use: http://www.arilabs.com/portal/downloads/ARI-MDLs.zip

					RL (ppm unless noted)	
Analyte	**ARI SOP**	**MDL Date**	**Spike Level (ppm)**	**MDL (ppm)**	**Water**	**Soil [4]**
Sulfide - Method 376.2	640S	4/12/07	0.15	0.026	0.05	1.0
Sulfide (Acid Volatile)	640S	1/29/07	0.014	0.045	0.135	1.0
Sulfide (PSEP)	640S	1/29/09	0.25	0.348	0.45	1.0
Sulfide (EPA Method 9030)	640S	1/6/09	0.5	0.10	0.30	1.0
Sulfate	637S	8/10/11	3.0	3.34	6.7	20.0
Sulfite	641S	4/3/08	5.0	1.4	2.0 [5]	NA
TIC – Inorganic Carbon		1/11/08	5.0	0.434	1.5	NA
TKN (EPA Method 351.4 – ISE)	642S	8/10/11	0.6	0.54	0.8	0.8
TKN (EPA Method 351.2 – FIA)	654S				0.3	0.3
TOC - Aqueous	602S	8/10/11	1.00	0.79	1.5	NA
TOC – Solid[3]	602S	8/10/11	0.005%	0.0047%	NA	0.01%
Total Solids	639S			NA	5.0	0.01%
Total Suspended Solids	639S	8/10/11		0.4	1.0	NA
Total Dissolved Solids	639S	8/10/11		23.2	46	NA
Total Volatile Solids	639S			NA	5.0	0.01%
Total Settleable Solids	639S			NA	0.1	NA
Turbidity	643S			NA	0.05 NTU	NA

Method Detection Limit (MDL) studies are performed in accordance with 40 CFR Part 136, Appendix B.
Reporting Limit (RL) is defined as the lowest value at which qualitative detection of a given analyte is reported. The RL is based on the MDL, method efficiency, and analyte response.

(1) Calculated using Ca and Mg RL from ICP analyses of water.
(2) HEM Reporting Limit based on a 10 g sample size
(3) TOC MDL study performed using muffled (500℃ fo r 1 hr) Ottawa sand.
(4) RL assumes 100% solids
(5) An RL for sulfite is calculated for each analytical batch using blank data and is typically between 1 and 2 ppm.

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VR32

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SA2-8C	VR32A	12-22189	
SA2-8CD	VR32ADUP	12-22189	
SA2-8CS	VR32ASPK	12-22189	
SA2-Field Duplicat	VR32B	12-22190	
PBS	VR32MB1	12-22190	
LCSS	VR32MB1SPK	12-22190	
SA3-1C	VR32C	12-22191	
SA3-2C	VR32D	12-22192	
SA3-3C	VR32E	12-22193	
SA3-4C	VR32F	12-22194	
SA3-4P-1(0 to 3	VR32G	12-22195	
SA3-4P-2(3 to 6	VR32H	12-22196	
SA3-4P-3(6 to 12	VR32I	12-22197	
SA3-4P-4(12 to 24	VR32J	12-22198	
SA3-5C	VR32K	12-22199	
SA3-6C	VR32L	12-22200	

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 12/6/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-8C
SAMPLE

Lab Sample ID: VR32A
LIMS ID: 12-22189
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 96.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.4	10	**23,600**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**16.2**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**392**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.8**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.1**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.5	10	**4,590**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**30.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.5**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**17.6**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**23,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**59.5**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**5,490**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.095	0.2	**1,160**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.033**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**31.7**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	41	120	**2,090**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.5	120	**220**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**25.7**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**210**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-8C
DUPLICATE

Lab Sample ID: VR32A
LIMS ID: 12-22189
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Aluminum	6010C	23,600	24,600	4.1%	+/- 20%	
Antimony	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Arsenic	200.8	16.2	15.4	5.1%	+/- 20%	
Barium	6010C	392	405	3.3%	+/- 20%	
Beryllium	200.8	0.8	0.8	0.0%	+/- 0.2	L
Cadmium	200.8	2.1	1.9	10.0%	+/- 20%	
Calcium	6010C	4,590	4,950	7.5%	+/- 20%	
Chromium	200.8	30.3	30.0	1.0%	+/- 20%	
Cobalt	200.8	8.5	8.7	2.3%	+/- 20%	
Copper	200.8	17.6	17.7	0.6%	+/- 20%	
Iron	6010C	23,700	24,900	4.9%	+/- 20%	
Lead	200.8	59.5	54.6	8.6%	+/- 20%	
Magnesium	6010C	5,490	5,610	2.2%	+/- 20%	
Manganese	6010C	1,160	1,140	1.7%	+/- 20%	
Mercury	7471A	0.033	0.031	6.2%	+/- 0.007	L
Nickel	200.8	31.7	31.8	0.3%	+/- 20%	
Potassium	6010C	2,090	2,240	6.9%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.2	0.2 U	0.0%	+/- 0.2	L
Sodium	6010C	220	230	4.4%	+/- 120	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Vanadium	200.8	25.7	29.5	13.8%	+/- 20%	
Zinc	200.8	210	204	2.9%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-8C
MATRIX SPIKE

Lab Sample ID: VR32A
LIMS ID: 12-22189
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample		Spike Added	% Recovery	Q
Aluminum	6010C	23,600		24,700	190	579%	H
Antimony	200.8	0.2	U	1.3	25.0	5.2%	N
Arsenic	200.8	16.2		39.1	25.0	91.6%	
Barium	6010C	392		608	190	114%	
Beryllium	200.8	0.8		26.4	25.0	102%	
Cadmium	200.8	2.1		26.7	25.0	98.4%	
Calcium	6010C	4,590		6,800	948	233%	H
Chromium	200.8	30.3		56.1	25.0	103%	
Cobalt	200.8	8.5		33.5	25.0	100%	
Copper	200.8	17.6		42.2	25.0	98.4%	
Iron	6010C	23,700		24,800	190	579%	H
Lead	200.8	59.5		80.7	25.0	84.8%	
Magnesium	6010C	5,490		6,480	948	104%	H
Manganese	6010C	1,160		1,200	47.4	84.4%	H
Mercury	7471A	0.033		0.096	0.0702	89.7%	
Nickel	200.8	31.7		56.3	25.0	98.4%	
Potassium	6010C	2,090		3,180	948	115%	
Selenium	200.8	0.5	U	74.0	80.0	92.5%	
Silver	200.8	0.2		23.0	25.0	91.2%	
Sodium	6010C	220		1,180	948	101%	
Thallium	200.8	0.2	U	25.2	25.0	101%	
Vanadium	200.8	25.7		55.6	25.0	120%	
Zinc	200.8	210		269	80.0	73.8%	N

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA2-Field Duplicate
SAMPLE

Lab Sample ID: VR32B
LIMS ID: 12-22190
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 97.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.3	5	**14,700**	
3050B	11/14/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.012	0.2	**0.4**	
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**16.8**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.056	0.3	**308**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**4.9**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.8	5	**3,390**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**15.9**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**6.4**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**15.8**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.70	5	**18,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**229**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.3	5	**4,100**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.038	0.09	**1,270**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.060**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**12.9**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	16	50	**1,620**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**180**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**25.3**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**252**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-1C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32C
LIMS ID: 12-22191
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Percent Total Solids: 96.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**21,900**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.083	0.2	**6.5**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**316**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.6**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.011	0.1	**0.6**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.8	5	**4,090**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**20.6**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**6.4**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.034	0.5	**17.5**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.73	5	**20,400**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**31.0**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.3	5	**4,260**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**862**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.022**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**19.4**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,640**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0076	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**210**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**23.7**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.32	4	**83**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-2C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32D
LIMS ID: 12-22192
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 96.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**17,200**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**5.9**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**442**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.4**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**2,800**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**11.8**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**4.6**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**9.8**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**14,200**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**64.1**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**2,350**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**1,290**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.031**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**13.0**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**990**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**220**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**17.5**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**143**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-3C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32E
LIMS ID: 12-22193
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 96.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**20,300**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**15.2**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.060	0.3	**422**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.9**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**4.0**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**6,260**	
3050B	11/14/12	200.8	11/16/12	**7440-47-3**	**Chromium**	0.18	2	**62**	
3050B	11/14/12	200.8	11/16/12	**7440-48-4**	**Cobalt**	0.15	1	**11**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**21.7**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**23,300**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**174**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**8,830**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.040	0.1	**1,420**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.036**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**55.8**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**2,800**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**150**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.2**	
3050B	11/14/12	200.8	11/16/12	**7440-62-2**	**Vanadium**	0.082	1	**35**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**272**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-4C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32F
LIMS ID: 12-22194
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**14,800**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**12.8**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**275**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.6**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**2,930**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**12.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**4.9**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**10.3**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**14,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**73.8**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**2,670**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**983**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.027**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**11.4**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,090**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0079	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**170**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**18.7**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**128**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA3-4P-1(0 to 3" depth)
SAMPLE

Lab Sample ID: VR32G
LIMS ID: 12-22195
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.4	5	**16,000**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.082	0.2	**6.8**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.057	0.3	**201**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.011	0.09	**0.65**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.8	5	**2,480**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**15.0**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.030	0.2	**5.0**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.034	0.5	**10.0**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.72	5	**15,300**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.044	0.09	**49.3**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.3	5	**2,800**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.038	0.1	**799**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.021**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.046	0.5	**12.3**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**880**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.094	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0076	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**150**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0028	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**21.5**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.32	4	**80**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA3-4P-2(3 to 6" depth)
SAMPLE

Lab Sample ID: VR32H
LIMS ID: 12-22196
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.6	5	**16,400**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**4.7**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.061	0.3	**236**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.5**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**2,290**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**13.5**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**4.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**9.8**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.76	5	**15,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**22.0**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**2,610**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.040	0.1	**875**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.017**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**12.2**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	18	50	**910**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0081	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**140**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0031	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**19.9**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.35	4	**61**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA3-4P-3(6 to 12" depth)
SAMPLE

Lab Sample ID: VR32I
LIMS ID: 12-22197
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 98.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**16,400**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.088	0.2	**3.2**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.060	0.3	**138**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.3**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.9	5	**2,200**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**14.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**5.0**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**11.8**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.74	5	**16,900**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**9.0**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.4	5	**2,760**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.040	0.1	**299**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.017**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**12.3**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**850**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0081	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.1	50	**150**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**21.4**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**44**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA3-4P-4(12 to 24" depth)
SAMPLE

Lab Sample ID: VR32J
LIMS ID: 12-22198
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 98.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.5	5	**12,900**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**3.3**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.059	0.3	**98.0**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.4**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.2**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.8	5	**1,800**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**14.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**4.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**10.4**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.73	5	**14,300**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**8.2**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.3	5	**2,670**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**262**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.012**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**11.9**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**760**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**120**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**21.9**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**35**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-5C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32K
LIMS ID: 12-22199
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	**7429-90-5**	**Aluminum**	3.4	5	**11,000**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**8.7**	
3050B	11/14/12	6010C	11/15/12	**7440-39-3**	**Barium**	0.058	0.3	**269**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.4**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.3**	
3050B	11/14/12	6010C	11/15/12	**7440-70-2**	**Calcium**	1.8	5	**2,990**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**20.6**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**5.6**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**14.7**	
3050B	11/14/12	6010C	11/15/12	**7439-89-6**	**Iron**	0.73	5	**15,100**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**105**	
3050B	11/14/12	6010C	11/15/12	**7439-95-4**	**Magnesium**	1.3	5	**3,420**	
3050B	11/14/12	6010C	11/15/12	**7439-96-5**	**Manganese**	0.039	0.1	**622**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.025**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**14.0**	
3050B	11/14/12	6010C	11/15/12	**7440-09-7**	**Potassium**	17	50	**1,120**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0079	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	**7440-23-5**	**Sodium**	1.0	50	**110**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**19.5**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**144**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-6C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR32L
LIMS ID: 12-22200
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 93.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.9	10	**19,700**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**17.7**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**934**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.8**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**11.1**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**14,900**	
3050B	11/14/12	200.8	11/19/12	**7440-47-3**	**Chromium**	0.19	2	**94**	
3050B	11/14/12	200.8	11/19/12	**7440-48-4**	**Cobalt**	0.16	1	**22**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**47.0**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**36,300**	
3050B	11/14/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.23	0.5	**509**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**11,800**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**2,420**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.148**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**73.9**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**4,310**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0079	0.2	**0.3**	
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	2.7	130	130	U
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.6**	
3050B	11/14/12	200.8	11/19/12	**7440-62-2**	**Vanadium**	0.084	1	**36**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**660**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VR32MB
LIMS ID: 12-22190
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/15/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/14/12	200.8	11/16/12	7440-41-7	Beryllium	0.018	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	11/14/12	6010C	11/15/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/14/12	200.8	11/15/12	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	11/14/12	200.8	11/15/12	7440-48-4	Cobalt	0.032	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-50-8	Copper	0.036	0.5	0.5	U
3050B	11/14/12	6010C	11/15/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/14/12	200.8	11/15/12	7439-92-1	Lead	0.047	0.1	0.1	U
3050B	11/14/12	6010C	11/15/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/14/12	6010C	11/15/12	7439-96-5	Manganese	0.040	0.1	0.1	U
CLP	11/14/12	7471A	11/17/12	7439-97-6	Mercury	0.0004	0.007	0.007	U
3050B	11/14/12	200.8	11/15/12	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	11/14/12	6010C	11/15/12	7440-09-7	Potassium	17	50	50	U
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/14/12	200.8	11/15/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/14/12	6010C	11/15/12	7440-23-5	Sodium	1.1	50	50	U
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-62-2	Vanadium	0.017	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-66-6	Zinc	0.34	4	4	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR32LCS
LIMS ID: 12-22190
Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

QC Report No: VR32-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	206	200	103%	
Antimony	200.8	25.4	25.0	102%	
Arsenic	200.8	25.0	25.0	100%	
Barium	6010C	204	200	102%	
Beryllium	200.8	25.4	25.0	102%	
Cadmium	200.8	25.4	25.0	102%	
Calcium	6010C	995	1000	99.5%	
Chromium	200.8	25.5	25.0	102%	
Cobalt	200.8	26.5	25.0	106%	
Copper	200.8	25.7	25.0	103%	
Iron	6010C	217	200	108%	
Lead	200.8	27.0	25.0	108%	
Magnesium	6010C	1030	1000	103%	
Manganese	6010C	52.5	50.0	105%	
Mercury	7471A	0.128	0.143	89.5%	
Nickel	200.8	25.4	25.0	102%	
Potassium	6010C	980	1000	98.0%	
Selenium	200.8	79.5	80.0	99.4%	
Silver	200.8	24.3	25.0	97.2%	
Sodium	6010C	950	1000	95.0%	
Thallium	200.8	27.3	25.0	109%	
Vanadium	200.8	25.8	25.0	103%	
Zinc	200.8	81	80	101%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111571	2000.0	2034.01	**101.7**	2000.0	2057.15	**102.9**	2033.12	**101.7**	2049.61	**102.5**	2052.40	**102.6**	2039.87	**102.0**
Antimony	SB	PMS	MS111511	50.0	49.58	**99.2**	50.0	50.25	**100.5**	50.82	**101.6**	50.96	**101.9**	50.90	**101.8**	49.85	**99.7**
Arsenic	AS	PMS	MS111511	50.0	49.14	**98.3**	50.0	49.58	**99.2**	48.12	**96.2**	49.70	**99.4**	48.61	**97.2**	48.76	**97.5**
Barium	BA	ICP	IP111571	1000.0	1043.48	**104.3**	1000.0	1057.09	**105.7**	1055.45	**105.5**	1045.37	**104.5**	1046.10	**104.6**	1046.22	**104.6**
Cadmium	CD	PMS	MS111511	50.0	49.59	**99.2**	50.0	50.91	**101.8**	51.07	**102.1**	50.40	**100.8**	51.00	**102.0**	50.23	**100.5**
Calcium	CA	ICP	IP111571	2000.0	1953.19	**97.7**	2000.0	2000.11	**100.0**	1999.79	**100.0**	2134.09	**106.7**	2097.34	**104.9**	2118.65	**105.9**
Chromium	CR	PMS	MS111511	50.0	49.15	**98.3**	50.0	50.26	**100.5**	49.93	**99.9**	50.58	**101.2**	50.52	**101.0**	49.49	**99.0**
Cobalt	CO	PMS	MS111511	50.0	50.76	**101.5**	50.0	51.79	**103.6**	50.52	**101.0**	51.00	**102.0**	51.84	**103.7**	50.64	**101.3**
Copper	CU	PMS	MS111511	50.0	49.41	**98.8**	50.0	51.23	**102.5**	49.01	**98.0**	50.66	**101.3**	49.43	**98.9**	48.84	**97.7**
Iron	FE	ICP	IP111571	2000.0	2067.26	**103.4**	2000.0	2095.64	**104.8**	2075.64	**103.8**	2127.81	**106.4**	2136.92	**106.8**	2130.25	**106.5**
Lead	PB	PMS	MS111511	50.0	51.24	**102.5**	50.0	51.29	**102.6**	50.89	**101.8**	51.46	**102.9**	51.50	**103.0**	50.98	**102.0**
Magnesium	MG	ICP	IP111571	2000.0	2043.72	**102.2**	2000.0	2081.35	**104.1**	2065.21	**103.3**	2076.19	**103.8**	2082.19	**104.1**	2092.50	**104.6**
Manganese	MN	ICP	IP111571	1000.0	994.12	**99.4**	1000.0	1002.33	**100.2**	993.84	**99.4**	1010.52	**101.1**	1016.55	**101.7**	1063.59	**106.4**
Mercury	HG	CVA	HG111701	8.0	7.26	**90.8**	4.0	3.69	**92.3**	3.65	**91.3**	1.76	**44.0**	3.63	**90.8**	3.59	**89.8**
Nickel	NI	PMS	MS111511	50.0	49.09	**98.2**	50.0	50.47	**100.9**	48.27	**96.5**	49.43	**98.9**	48.80	**97.6**	48.90	**97.8**
Potassium	K	ICP	IP111571	20000.0	19903.24	**99.5**	20000.0	20061.06	**100.3**	19997.84	**100.0**	20053.11	**100.3**	20122.20	**100.6**	20301.61	**101.5**
Selenium	SE	PMS	MS111511	80.0	76.84	**96.1**	50.0	49.83	**99.7**	48.32	**96.6**	50.16	**100.3**	49.16	**98.3**	49.29	**98.6**
Silver	AG	PMS	MS111511	50.0	48.91	**97.8**	50.0	47.69	**95.4**	45.83	**91.7**	47.36	**94.7**	48.36	**96.7**	45.98	**92.0**
Sodium	NA	ICP	IP111571	50000.0	49381.76	**98.8**	50000.0	49573.31	**99.1**	49386.04	**98.8**	49271.59	**98.5**	49674.68	**99.3**	49803.59	**99.6**
Thallium	TL	PMS	MS111511	50.0	52.26	**104.5**	50.0	51.73	**103.5**	51.44	**102.9**	52.64	**105.3**	52.48	**105.0**	51.65	**103.3**
Vanadium	V	PMS	MS111511	50.0	50.37	**100.7**	50.0	49.83	**99.7**	48.87	**97.7**	49.80	**99.6**	50.19	**100.4**	49.71	**99.4**
Zinc	ZN	PMS	MS111511	50.0	49.08	**98.2**	50.0	49.71	**99.4**	49.06	**98.1**	50.87	**101.7**	49.72	**99.4**	47.97	**95.9**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111571	2000.0	2030.56	101.5	2043.68	102.2	2005.16	100.3	2080.71	104.0	2041.31	102.1	2029.47	101.5
Antimony	SB	PMS	MS111511	50.0	50.55	101.1	50.81	101.6	50.31	100.6	50.32	100.6				
Arsenic	AS	PMS	MS111511	50.0	48.54	97.1	49.34	98.7	49.93	99.9	48.70	97.4				
Barium	BA	ICP	IP111571	1000.0	1030.78	103.1	1031.76	103.2	1018.21	101.8	1029.98	103.0	1040.09	104.0	1028.61	102.9
Cadmium	CD	PMS	MS111511	50.0	50.81	101.6	50.92	101.8	50.81	101.6	49.82	99.6				
Calcium	CA	ICP	IP111571	2000.0	2100.18	105.0	1991.74	99.6	2065.33	103.3	1996.35	99.8	2007.94	100.4	2091.67	104.6
Chromium	CR	PMS	MS111511	50.0	49.57	99.1	50.24	100.5	49.57	99.1	48.95	97.9				
Cobalt	CO	PMS	MS111511	50.0	50.73	101.5	51.17	102.3	50.32	100.6	48.84	97.7				
Copper	CU	PMS	MS111511	50.0	48.37	96.7	48.86	97.7	49.61	99.2	48.98	98.0				
Iron	FE	ICP	IP111571	2000.0	2145.42	107.3	2167.62	108.4	2109.60	105.5	2197.09	109.9	2175.81	108.8	2140.51	107.0
Lead	PB	PMS	MS111511	50.0	51.44	102.9	51.22	102.4	50.71	101.4	50.18	100.4				
Magnesium	MG	ICP	IP111571	2000.0	2051.61	102.6	2080.47	104.0	2018.75	100.9	2071.91	103.6	2079.32	104.0	2048.37	102.4
Manganese	MN	ICP	IP111571	1000.0	1062.61	106.3	1022.52	102.3	1058.89	105.9	1023.96	102.4	1021.70	102.2	1048.40	104.8
Mercury	HG	CVA	HG111701	4.0	3.60	90.0	3.64	91.0	3.61	90.3	3.56	89.0	3.71	92.8	3.72	93.0
Nickel	NI	PMS	MS111511	50.0	48.10	96.2	49.26	98.5	48.91	97.8	47.68	95.4				
Potassium	K	ICP	IP111571	20000.0	20222.70	101.1	20015.25	100.1	20180.71	100.9	20011.02	100.1	20062.23	100.3	20124.63	100.6
Selenium	SE	PMS	MS111511	50.0	49.24	98.5	49.76	99.5	50.69	101.4	49.16	98.3				
Silver	AG	PMS	MS111511	50.0	45.76	91.5	43.69	87.4	44.61	89.2	41.85	83.7				
Sodium	NA	ICP	IP111571	50000.0	49591.73	99.2	49095.69	98.2	49661.26	99.3	49172.17	98.3	49160.91	98.3	49402.83	98.8
Thallium	TL	PMS	MS111511	50.0	52.17	104.3	52.64	105.3	51.59	103.2	51.08	102.2				
Vanadium	V	PMS	MS111511	50.0	50.17	100.3	50.76	101.5	49.17	98.3	49.12	98.2				
Zinc	ZN	PMS	MS111511	50.0	48.94	97.9	50.16	100.3	50.38	100.8	48.98	98.0				

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR32

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Aluminum	AL	ICP	IP111571	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111571	1000.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111571	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111571	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111571	2000.0												
Manganese	MN	ICP	IP111571	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.66	**91.5**	3.61	**90.3**	3.55	**88.8**	3.45	**86.3**	3.54	**88.5**		
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111571	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Silver	AG	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111571	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR32

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111671	2000.0	1993.69	**99.7**	2000.0	2097.56	**104.9**	2041.11	**102.1**	2092.74	**104.6**	2083.91	**104.2**		
Barium	BA	ICP	IP111671	1000.0	1018.64	**101.9**	1000.0	1041.05	**104.1**	1040.26	**104.0**	1080.46	**108.0**	1068.00	**106.8**		
Beryllium	BE	PMS	MS111611	50.0	49.89	**99.8**	50.0	50.03	**100.1**	50.41	**100.8**	50.48	**101.0**	52.74	**105.5**	51.80	**103.6**
Calcium	CA	ICP	IP111671	2000.0	1908.96	**95.4**	2000.0	1978.86	**98.9**	1948.46	**97.4**	2125.08	**106.3**	2028.08	**101.4**		
Chromium	CR	PMS	MS111611	50.0	50.06	**100.1**	50.0	49.89	**99.8**	48.66	**97.3**	47.51	**95.0**	47.79	**95.6**	46.68	**93.4**
Cobalt	CO	PMS	MS111611	50.0	48.90	**97.8**	50.0	49.41	**98.8**	50.38	**100.8**	47.20	**94.4**	47.13	**94.3**	45.23	**90.5**
Iron	FE	ICP	IP111671	2000.0	2000.63	**100.0**	2000.0	2124.56	**106.2**	2043.91	**102.2**	2138.97	**106.9**	2128.52	**106.4**		
Lead	PB	PMS	MS111611	50.0	50.17	**100.3**	50.0	49.41	**98.8**	49.78	**99.6**	49.17	**98.3**	49.98	**100.0**	49.71	**99.4**
Magnesium	MG	ICP	IP111671	2000.0	1991.52	**99.6**	2000.0	2083.31	**104.2**	2041.91	**102.1**	2105.19	**105.3**	2112.69	**105.6**		
Manganese	MN	ICP	IP111671	1000.0	983.41	**98.3**	1000.0	987.07	**98.7**	986.80	**98.7**	1060.71	**106.1**	1007.27	**100.7**		
Potassium	K	ICP	IP111671	20000.0	19701.02	**98.5**	20000.0	19744.17	**98.7**	19949.30	**99.7**	20493.51	**102.5**	20090.12	**100.5**		
Sodium	NA	ICP	IP111671	50000.0	48621.30	**97.2**	50000.0	48657.79	**97.3**	49021.38	**98.0**	52938.44	**105.9**	49020.90	**98.0**		
Vanadium	V	PMS	MS111611	50.0	50.50	**101.0**	50.0	49.34	**98.7**	49.12	**98.2**	47.41	**94.8**	48.59	**97.2**	47.31	**94.6**
Zinc	ZN	PMS	MS111611	50.0	50.78	**101.6**	50.0	50.45	**100.9**	50.27	**100.5**	49.95	**99.9**	49.45	**98.9**	50.88	**101.8**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS:ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111671	2000.0												
Barium	BA	ICP	IP111671	1000.0												
Beryllium	BE	PMS	MS111611	50.0	53.27	**106.5**										
Calcium	CA	ICP	IP111671	2000.0												
Chromium	CR	PMS	MS111611	50.0	45.77	**91.5**										
Cobalt	CO	PMS	MS111611	50.0	44.85	**89.7**										
Iron	FE	ICP	IP111671	2000.0												
Lead	PB	PMS	MS111611	50.0	48.66	**97.3**										
Magnesium	MG	ICP	IP111671	2000.0												
Manganese	MN	ICP	IP111671	1000.0												
Potassium	K	ICP	IP111671	20000.0												
Sodium	NA	ICP	IP111671	50000.0												
Vanadium	V	PMS	MS111611	50.0	47.41	**94.8**										
Zinc	ZN	PMS	MS111611	50.0	50.42	**100.8**										

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

VR32 [illegible]

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Chromium	CR	PMS	MS111911	50.0	51.49	**103.0**	50.0	50.49	**101.0**	50.58	**101.2**	49.72	**99.4**	50.40	**100.8**		
Cobalt	CO	PMS	MS111911	50.0	50.78	**101.6**	50.0	50.10	**100.2**	49.70	**99.4**	50.57	**101.1**	49.34	**98.7**		
Silver	AG	PMS	MS111911	50.0	51.46	**102.9**	50.0	48.46	**96.9**	47.74	**95.5**	48.96	**97.9**	49.20	**98.4**		
Vanadium	V	PMS	MS111911	50.0	51.44	**102.9**	50.0	49.50	**99.0**	49.93	**99.9**	49.04	**98.1**	49.83	**99.7**		

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Aluminum	AL	ICP	IP111571	50.0	52.93	**105.9**	50.87	**101.7**	46.58	**93.2**						
Antimony	SB	PMS	MS111511	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS111511	0.2	0.19	**95.0**										
Barium	BA	ICP	IP111571	3.0	3.20	**106.7**	1.91	**63.7**	3.33	**111.0**						
Cadmium	CD	PMS	MS111511	0.1	0.12	**120.0**										
Calcium	CA	ICP	IP111571	50.0	47.15	**94.3**	50.24	**100.5**	49.52	**99.0**						
Chromium	CR	PMS	MS111511	0.5	0.61	**122.0**										
Cobalt	CO	PMS	MS111511	0.2	0.21	**105.0**										
Copper	CU	PMS	MS111511	0.5	0.54	**108.0**										
Iron	FE	ICP	IP111571	50.0	53.86	**107.7**	57.87	**115.7**	58.59	**117.2**						
Lead	PB	PMS	MS111511	0.1	0.12	**120.0**										
Magnesium	MG	ICP	IP111571	50.0	51.09	**102.2**	54.00	**108.0**	55.54	**111.1**						
Manganese	MN	ICP	IP111571	1.0	1.15	**115.0**	1.24	**124.0**	1.27	**127.0**						
Mercury	HG	CVA	HG111701	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS111511	0.5	0.52	**104.0**										
Potassium	K	ICP	IP111571	500.0	471.13	**94.2**	499.91	**100.0**	482.53	**96.5**						
Selenium	SE	PMS	MS111511	0.5	0.58	**116.0**										
Silver	AG	PMS	MS111511	0.2	0.20	**100.0**										
Sodium	NA	ICP	IP111571	500.0	468.93	**93.8**	469.84	**94.0**	469.27	**93.9**						
Thallium	TL	PMS	MS111511	0.2	0.22	**110.0**										
Vanadium	V	PMS	MS111511	0.2	0.23	**115.0**										
Zinc	ZN	PMS	MS111511	4.0	4.42	**110.5**										
Aluminum	AL	ICP	IP111671	50.0	60.56	**121.1**	59.46	**118.9**	60.85	**121.7**						
Barium	BA	ICP	IP111671	3.0	2.28	**76.0**	2.93	**97.7**	2.29	**76.3**						
Beryllium	BE	PMS	MS111611	0.2	0.20	**100.0**										
Calcium	CA	ICP	IP111671	50.0	47.91	**95.8**	50.54	**101.1**	51.28	**102.6**						
Chromium	CR	PMS	MS111611	0.5	0.47	**94.0**										
Cobalt	CO	PMS	MS111611	0.2	0.20	**100.0**										
Iron	FE	ICP	IP111671	50.0	53.99	**108.0**	57.63	**115.3**	62.83	**125.7**						
Lead	PB	PMS	MS111611	0.1	0.11	**110.0**										
Magnesium	MG	ICP	IP111671	50.0	54.79	**109.6**	58.12	**116.2**	51.93	**103.9**						
Manganese	MN	ICP	IP111671	1.0	0.86	**86.0**	1.06	**106.0**	0.92	**92.0**						

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Potassium	K	ICP	IP111671	500.0	501.15	**100.2**	506.23	**101.2**	498.77	**99.8**						
Sodium	NA	ICP	IP111671	500.0	471.16	**94.2**	475.77	**95.2**	466.00	**93.2**						
Vanadium	V	PMS	MS111611	0.2	0.19	**95.0**										
Zinc	ZN	PMS	MS111611	4.0	4.32	**108.0**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR32

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Chromium	CR	PMS	MS111911	0.5	0.58	**116.0**										
Cobalt	CO	PMS	MS111911	0.2	0.21	**105.0**										
Silver	AG	PMS	MS111911	0.2	0.21	**105.0**										
Vanadium	V	PMS	MS111911	0.2	0.24	**120.0**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111571	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111571	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111571	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111571	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.4	B
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Sodium	NA	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111571	200.0	50.0	50.0	U	50.0	U	50.0	U	86.2	B	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Barium	BA	ICP	IP111571	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Calcium	CA	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Iron	FE	ICP	IP111571	100.0	50.0	50.0	U	50.0	U	50.0	U	135.3		50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Magnesium	MG	ICP	IP111571	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111571	15.0	1.0	1.0	U	1.0	U	1.0	U	7.1	B	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Potassium	K	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				
Silver	AG	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Sodium	NA	ICP	IP111571	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U				

VR32 - 50615

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Aluminum	AL	ICP	IP111571	200.0	50.0	50.0	U										
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111571	200.0	3.0	3.0	U										
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111571	5000.0	50.0	50.0	U										
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111571	100.0	50.0	50.0	U										
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111571	5000.0	50.0	50.0	U										
Manganese	MN	ICP	IP111571	15.0	1.0	1.0	U										
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111571	5000.0	500.0	500.0	U										
Selenium	SE	PMS	MS111511	5.0	0.5												
Silver	AG	PMS	MS111511	10.0	0.2												
Sodium	NA	ICP	IP111571	5000.0	500.0	500.0	U										
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U		
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Chromium	CR	PMS	MS111611	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111611	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U		
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U		
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U		
Vanadium	V	PMS	MS111611	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111671	200.0	50.0												
Barium	BA	ICP	IP111671	200.0	3.0												
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U										
Calcium	CA	ICP	IP111671	5000.0	50.0												
Chromium	CR	PMS	MS111611	10.0	0.5	0.5	U										
Cobalt	CO	PMS	MS111611	50.0	0.2	0.2	U										
Iron	FE	ICP	IP111671	100.0	50.0												
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U										
Magnesium	MG	ICP	IP111671	5000.0	50.0												
Manganese	MN	ICP	IP111671	15.0	1.0												
Potassium	K	ICP	IP111671	5000.0	500.0												
Sodium	NA	ICP	IP111671	5000.0	500.0												
Vanadium	V	PMS	MS111611	50.0	0.2	0.2	U										
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U										

VR32:00015

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Chromium	CR	PMS	MS111911	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Cobalt	CO	PMS	MS111911	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Silver	AG	PMS	MS111911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Vanadium	V	PMS	MS111911	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: IP111571

SDG: VR32

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198213.3	199849.8	**99.9**	196495.1	198205.3	**99.1**	198994.6	198243.6	**99.1**
Antimony		1000	6.7	989.8	**99.0**	5.5	1022.9	**102.3**	7.6	1012.1	**101.2**
Arsenic		1000	15.7	970.2	**97.0**	16.0	1017.4	**101.7**	15.8	1000.0	**100.0**
Barium		1000	-0.7	1042.9	**104.3**	-0.9	1021.4	**102.1**	-1.1	1032.2	**103.2**
Beryllium		1000	0.1	949.6	**95.0**	0.1	985.8	**98.6**	0.1	967.1	**96.7**
Boron			-0.3	-2.2		-2.4	-1.7		-2.1	-2.8	
Cadmium		1000	0.1	1016.9	**101.7**	-0.2	1058.3	**105.8**	-0.2	1031.6	**103.2**
Calcium	100000	100000	99373.3	100656.7	**100.7**	99965.3	102432.0	**102.4**	100775.4	101108.1	**101.1**
Chromium		1000	-0.7	1034.6	**103.5**	-0.6	1047.2	**104.7**	-1.0	1046.7	**104.7**
Cobalt		1000	0.1	995.9	**99.6**	0.0	1022.6	**102.3**	-0.2	1013.1	**101.3**
Copper		1000	-0.2	1028.2	**102.8**	-0.8	1070.0	**107.0**	-0.5	1027.3	**102.7**
Iron	200000	200000	193137.0	195376.0	**97.7**	199762.4	204939.7	**102.5**	200954.0	201468.1	**100.7**
Lead		1000	2.7	934.3	**93.4**	1.5	965.4	**96.5**	2.1	956.0	**95.6**
Magnesium	100000	100000	103217.4	100248.4	**100.2**	104176.4	101168.3	**101.2**	105258.1	100337.5	**100.3**
Manganese		1000	0.4	977.9	**97.8**	0.8	1015.0	**101.5**	0.8	1003.6	**100.4**
Molybdenum			1.1	1.2		1.2	1.2		1.5	1.3	
Nickel		1000	0.1	953.7	**95.4**	-1.2	960.3	**96.0**	0.3	962.6	**96.3**
Potassium			-1.8	-39.1		-3.7	-53.6		3.5	-50.4	
Selenium		1000	15.7	956.9	**95.7**	15.3	1004.3	**100.4**	10.9	986.9	**98.7**
Silicon			-1.9	-0.5		-5.0	-3.0		-1.1	-1.8	
Silver		1000	-1.2	967.1	**96.7**	-1.3	1002.2	**100.2**	-1.2	961.2	**96.1**
Sodium			10.6	26.5		6.1	20.3		6.4	18.0	
Strontium			3.9	3.9		4.0	4.0		4.0	3.9	
Thallium		1000	-3.7	902.3	**90.2**	-1.2	922.0	**92.2**	-2.2	914.6	**91.5**
Tin			-8.6	-8.1		-7.5	-6.5		-7.5	-7.0	
Titanium			2.5	2.4		2.1	1.7		2.1	1.8	
Vanadium		1000	4.4	980.1	**98.0**	5.5	1017.6	**101.8**	4.9	982.6	**98.3**
Zinc		1000	4.5	944.4	**94.4**	3.9	973.3	**97.3**	4.1	967.2	**96.7**

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: MS111511

SDG: VR32

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.8	**99.0**						
Chromium		20	0.6	20.1	**100.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.9	20.6	**103.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	417.3	421.0	**105.3**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	20.3	**101.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	0.9	20.0	**100.0**						

VR32 : 999552

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: IP111671

SDG: VR32

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198988.9	194148.2	**97.1**	203627.5	201946.1	**101.0**			
Antimony		1000	7.7	1012.6	**101.3**	8.0	1038.6	**103.9**			
Arsenic		1000	14.3	976.4	**97.6**	15.8	1005.5	**100.6**			
Barium		1000	-1.8	1005.3	**100.5**	-1.6	1064.1	**106.4**			
Beryllium		1000	0.2	934.2	**93.4**	0.2	976.8	**97.7**			
Boron			-0.6	-1.5		-2.7	-3.3				
Cadmium		1000	-0.3	1022.7	**102.3**	-0.2	1037.5	**103.8**			
Calcium	100000	100000	97594.0	97457.4	**97.5**	101854.7	102165.0	**102.2**			
Chromium		1000	-2.2	1004.0	**100.4**	-1.5	1056.9	**105.7**			
Cobalt		1000	-0.8	992.3	**99.2**	-0.9	1021.2	**102.1**			
Copper		1000	-0.1	1023.3	**102.3**	0.3	1032.4	**103.2**			
Iron	200000	200000	191940.1	191119.7	**95.6**	198295.7	198558.1	**99.3**			
Lead		1000	2.2	960.2	**96.0**	1.0	986.9	**98.7**			
Magnesium	100000	100000	102481.1	97554.2	**97.6**	105578.5	102153.7	**102.2**			
Manganese		1000	0.5	957.2	**95.7**	0.7	994.8	**99.5**			
Molybdenum			1.2	0.8		1.8	1.2				
Nickel		1000	0.1	937.2	**93.7**	0.4	986.2	**98.6**			
Potassium			7.7	-29.1		14.4	-8.2				
Selenium		1000	16.9	967.0	**96.7**	17.4	997.2	**99.7**			
Silicon			-1.6	-0.9		-1.4	0.1				
Silver		1000	-0.7	985.5	**98.6**	-0.8	999.7	**100.0**			
Sodium			16.3	30.9		10.2	26.9				
Strontium			3.9	3.7		3.9	3.9				
Thallium		1000	-0.6	911.1	**91.1**	-4.1	937.3	**93.7**			
Tin			-7.6	-7.5		-8.7	-9.2				
Titanium			2.7	2.0		2.4	2.2				
Vanadium		1000	3.7	978.0	**97.8**	3.8	997.6	**99.8**			
Zinc		1000	4.1	914.7	**91.5**	4.1	970.4	**97.0**			

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: MS111611

SDG: VR32

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.7	**98.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.7	**98.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	18.9	**94.5**						
Copper		20	1.2	20.9	**104.5**						
Manganese		20	0.1	19.4	**97.0**						
Molybdenum	400	400	449.1	461.4	**115.4**						
Nickel		20	0.4	20.0	**100.0**						
Selenium			-0.4	-0.4							
Silver		20	0.0	22.0	**110.0**						
Vanadium			0.1	0.1							
Zinc		20	1.7	19.8	**99.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: MS111911

SDG: VR32

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.3	**96.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.6	**98.0**						
Chromium		20	0.6	20.8	**104.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	1.2	20.8	**104.0**						
Manganese		20	0.1	19.0	**95.0**						
Molybdenum	400	400	426.2	433.4	**108.4**						
Nickel		20	0.4	20.6	**103.0**						
Selenium			-0.3	-0.3							
Silver		20	0.0	20.4	**102.0**						
Thorium			0.3	0.1							
Vanadium			0.2	0.1							
Zinc		20	1.3	19.9	**99.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR32

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	SA2-8CA	VR32APOST	MS111511	494.40	B	1000.00	U	500	Soil	**98.9**

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: ICP

SDG: VR32

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Aluminum	SA2-8CL	VR32A-L	Soil	IP111671	99632.36		98459.00		1.2	
Barium	SA2-8CL	VR32A-L	Soil	IP111671	1654.48		1655.95		0.1	
Calcium	SA2-8CL	VR32A-L	Soil	IP111671	19354.74		18983.95	B	1.9	
Iron	SA2-8CL	VR32A-L	Soil	IP111671	100120.15		99096.15		1.0	
Magnesium	SA2-8CL	VR32A-L	Soil	IP111671	23149.91		23124.55	B	0.1	
Manganese	SA2-8CL	VR32A-L	Soil	IP111671	4886.23		4833.50		1.1	
Potassium	SA2-8CL	VR32A-L	Soil	IP111671	8803.80		8874.25	B	0.8	
Sodium	SA2-8CL	VR32A-L	Soil	IP111671	906.93	B	2500.00	U	100.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR32

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	SA2-8CL	VR32A-L	Soil	MS111511	0.07	U	0.10	B		
Arsenic	SA2-8CL	VR32A-L	Soil	MS111511	16.25		16.55	B	1.8	
Cadmium	SA2-8CL	VR32A-L	Soil	MS111511	2.07	B	2.30	B	11.1	
Chromium	SA2-8CL	VR32A-L	Soil	MS111511	30.35		32.85	B	8.2	
Cobalt	SA2-8CL	VR32A-L	Soil	MS111511	8.54	B	9.50	B	11.2	
Copper	SA2-8CL	VR32A-L	Soil	MS111511	17.62	B	18.20	B	3.3	
Lead	SA2-8CL	VR32A-L	Soil	MS111511	59.60		63.05		5.8	
Nickel	SA2-8CL	VR32A-L	Soil	MS111511	31.75	B	32.50	B	2.4	
Selenium	SA2-8CL	VR32A-L	Soil	MS111511	-0.27	U	0.20	B		
Thallium	SA2-8CL	VR32A-L	Soil	MS111511	0.19	U	0.20	B		
Vanadium	SA2-8CL	VR32A-L	Soil	MS111511	25.76	B	28.65	B	11.2	
Zinc	SA2-8CL	VR32A-L	Soil	MS111511	210.32		222.90		6.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR32

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFER-ENCE	Q
Beryllium	SA2-8CL	VR32A-L	Soil	MS111611	0.83	B	0.85	B	2.4	
Silver	SA2-8CL	VR32A-L	Soil	MS111911	0.20	B	0.20	B	0.0	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	4/1/2012	250000.0	7/30/2012
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR32

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0581760	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1637240
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0091790	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0392710
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0130090
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0442360
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2393490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0412430
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5321920
Manganese	257.61	0.0046450	0.0000000	0.0000000	0.0000000	0.0019080	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054280
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0108090	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1069480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1236770	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0477260	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0349450
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

VR32.00051

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR32

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0863140	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0084630	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1197150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

VR32_99952

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ANALYSIS METHOD: ICP

PROJECT: Upper Columbia

ARI PREP CODE: SWC

SDG: VR32

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA2-8C	VR32A	1.089	0.0	50.0
SA2-8CD	VR32ADUP	1.093	0.0	50.0
SA2-8CS	VR32ASPK	1.090	0.0	50.0
SA2-Field Duplicat	VR32B	1.098	0.0	50.0
SA3-1C	VR32C	1.058	0.0	50.0
SA3-2C	VR32D	1.051	0.0	50.0
SA3-3C	VR32E	1.042	0.0	50.0
SA3-4C	VR32F	1.048	0.0	50.0
SA3-4P-1(0 to 3	VR32G	1.068	0.0	50.0
SA3-4P-2(3 to 6	VR32H	1.011	0.0	50.0
SA3-4P-3(6 to 12	VR32I	1.028	0.0	50.0
SA3-4P-4(12 to 24	VR32J	1.037	0.0	50.0
SA3-5C	VR32K	1.054	0.0	50.0
SA3-6C	VR32L	1.061	0.0	50.0
PBS	VR32MB1	1.000	0.0	50.0
LCSS	VR32MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA2-8C	VR32A	1.035	0.0	50.0
SA2-8CD	VR32ADUP	1.033	0.0	50.0
SA2-8CS	VR32ASPK	1.033	0.0	50.0
SA2-Field Duplicat	VR32B	1.074	0.0	50.0
SA3-1C	VR32C	1.082	0.0	50.0
SA3-2C	VR32D	1.073	0.0	50.0
SA3-3C	VR32E	1.074	0.0	50.0
SA3-4C	VR32F	1.044	0.0	50.0
SA3-4P-1(0 to 3	VR32G	1.082	0.0	50.0
SA3-4P-2(3 to 6	VR32H	1.004	0.0	50.0
SA3-4P-3(6 to 12	VR32I	1.007	0.0	50.0
SA3-4P-4(12 to 24	VR32J	1.054	0.0	50.0
SA3-5C	VR32K	1.039	0.0	50.0
SA3-6C	VR32L	1.076	0.0	50.0
PBS	VR32MB1	1.000	0.0	50.0
LCSS	VR32MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA2-8C	VR32A	0.733	0.0	50.0
SA2-8CD	VR32ADUP	0.732	0.0	50.0
SA2-8CS	VR32ASPK	0.736	0.0	50.0
SA2-Field Duplicat	VR32B	0.708	0.0	50.0
SA3-1C	VR32C	0.721	0.0	50.0
SA3-2C	VR32D	0.717	0.0	50.0
SA3-3C	VR32E	0.719	0.0	50.0
SA3-4C	VR32F	0.735	0.0	50.0
SA3-4P-1(0 to 3	VR32G	0.748	0.0	50.0
SA3-4P-2(3 to 6	VR32H	0.718	0.0	50.0
SA3-4P-3(6 to 12	VR32I	0.733	0.0	50.0
SA3-4P-4(12 to 24	VR32J	0.715	0.0	50.0
SA3-5C	VR32K	0.748	0.0	50.0
SA3-6C	VR32L	0.737	0.0	50.0
PBS	VR32MB1	0.700	0.0	50.0
LCSW	VR32MB1SPK	0.700	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/15/2012

SDG: VR32 | RUNID: IP111571 | METHOD: ICP | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08441			X			X		X					X		X	X	X		X											
S2	S2	1.00	08482						X											X													
S3	S3	1.00	08500																														
S4	S4	1.00	08524																														
S5	S5	1.00	08545			X					X					X		X	X			X											
ICV	ICV	1.00	08584			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09025			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09070			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09112			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09154			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09203			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09254			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40MB1	2.00	09441																														
ZZZZZZ	VS40B	5.00	09483																														
ZZZZZZ	VS40C	5.00	09530																														
ZZZZZZ	VS40D	5.00	09572																														
ZZZZZZ	VS40E	5.00	10014																														
ZZZZZZ	VS40F	5.00	10061																														
ZZZZZZ	VS40ADUP	5.00	10103																														
ZZZZZZ	VS40A	5.00	10145																														
ZZZZZZ	VS40ASPK	5.00	10191																														
ZZZZZZ	VS40MB1SPK	2.00	10231																														
CCV	CCV2	1.00	10271			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10322			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40G	5.00	10364																														
ZZZZZZ	VS40H	5.00	10410																														
ZZZZZZ	VS40I	5.00	10450																														
ZZZZZZ	VS40J	5.00	10491																														
ZZZZZZ	VS40F	10.00	10532																														
CCV	CCV3	1.00	10573			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	11024			X			X		X					X		X	X	X		X											
ZZZZZZ	VS40H	10.00	11070																														
ZZZZZZ	VS40I	10.00	11112																														
ZZZZZZ	VS40J	10.00	11153																														
CCV	CCV4	1.00	11195			X			X		X					X		X	X	X		X											

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/15/2012

SDG: VR32 | RUNID: IP111571 | METHOD: ICP | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB4	1.00	11250			X			X		X					X		X	X	X		X											
ZZZZZZ	VR30MB1	2.00	11291																														
ZZZZZZ	VR30B	2.00	11333																														
ZZZZZZ	VR30C	2.00	11373																														
ZZZZZZ	VR30D	2.00	11414																														
ZZZZZZ	VR30A-L	10.00	11454																														
ZZZZZZ	VR30A	2.00	11494																														
ZZZZZZ	VR30ADUP	2.00	11534																														
ZZZZZZ	VR30ASPK	2.00	11575																														
ZZZZZZ	ZZZZZZ	2.00	12011																														
ZZZZZZ	VR30MB1SPK	2.00	12043																														
CCV	CCV5	1.00	12083			X			X		X					X		X	X	X		X											
CCB	CCB5	1.00	12124			X			X		X					X		X	X	X		X											
ZZZZZZ	VR30MB2	2.00	12522																														
ZZZZZZ	VR30E	2.00	12564																														
ZZZZZZ	VR30F	2.00	13004																														
ZZZZZZ	VR30G	2.00	13044																														
ZZZZZZ	VR30H	2.00	13084																														
ZZZZZZ	VR30I	2.00	13124																														
ZZZZZZ	VR30J	2.00	13163																														
ZZZZZZ	VR30K	2.00	13203																														
ZZZZZZ	VR30L	2.00	13242																														
ZZZZZZ	VR30MB2SPK	2.00	13283																														
CCV	CCV6	1.00	13323			X			X		X					X		X	X	X		X											
CCB	CCB6	1.00	13365			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	13411			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	13452			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	13494			X			X		X					X		X	X	X		X											
CCV	CCV7	1.00	13534			X			X		X					X		X	X	X		X											
CCB	CCB7	1.00	13584			X			X		X					X		X	X	X		X											
CCV	CCV8	1.00	14502			X			X		X					X		X	X	X		X											
CCB	CCB8	1.00	14544			X			X		X					X		X	X	X		X											
PBS	VR32MB1	2.00	14590			X			X		X					X		X	X	X		X											
SA2-Field Duplicat	VR32B	2.00	15032			X			X		X					X		X	X	X		X											
SA3-1C	VR32C	2.00	15072			X			X		X					X		X	X	X		X											

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia — INSTRUMENT ID: OPTIMA ICP 2 — START DATE: 11/15/2012

SDG: VR32 — RUNID: IP111571 — METHOD: ICP — END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA3-2C	VR32D	2.00	15112			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	2.00	15152																														
SA2-8C	VR32A	2.00	15192																														
SA2-8CD	VR32ADUP	2.00	15233																														
SA2-8CS	VR32ASPK	2.00	15273																														
ZZZZZZ	ZZZZZZ	2.00	15305																														
LCSS	VR32MB1SPK	2.00	15341			X			X		X					X		X	X	X		X											
CCV	CCV9	1.00	15381			X			X		X					X		X	X	X		X											
CCB	CCB9	1.00	15430			X			X		X					X		X	X	X		X											
CCB	CCB10	1.00	15480			X			X		X					X		X	X	X		X											
SA3-3C	VR32E	2.00	15534			X			X		X					X		X	X	X		X											
SA3-4C	VR32F	2.00	15570			X			X		X					X		X	X	X		X											
SA3-4P-1(0 to 3	VR32G	2.00	16010			X			X		X					X		X	X	X		X											
SA3-4P-2(3 to 6	VR32H	2.00	16045			X			X		X					X		X	X	X		X											
SA3-4P-3(6 to 12	VR32I	2.00	16085			X			X		X					X		X	X	X		X											
SA3-4P-4(12 to 24	VR32J	2.00	16125			X			X		X					X		X	X	X		X											
SA3-5C	VR32K	2.00	16165			X			X		X					X		X	X	X		X											
SA3-6C	VR32L	2.00	16205																														
CCV	CCV10	1.00	16240			X			X		X					X		X	X	X		X											
CCB	CCB11	1.00	16290			X			X		X					X		X	X	X		X											
CRI	CRIF1	1.00	16332			X			X		X					X		X	X	X		X											
ICSA	ICSAF1	1.00	16374			X			X		X					X		X	X	X		X											
ICSAB	ICSABF1	1.00	16415			X			X		X					X		X	X	X		X											
CCV	CCV11	1.00	16454			X			X		X					X		X	X	X		X											
CCB	CCB12	1.00	16495			X			X		X					X		X	X	X		X											

VR32 : 00063

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/16/2012

SDG: VR32 | RUNID: IP111671 | METHOD: ICP | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08401			X			X		X					X		X	X	X		X											
S2	S2	1.00	08443						X											X													
S3	S3	1.00	08473																														
S4	S4	1.00	08501																														
S5	S5	1.00	08522			X					X					X		X	X			X											
S2	S2	1.00	09033						X											X													
ICV	ICV	1.00	09052			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09091			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09132			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09174			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09220			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09265			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09314			X			X		X					X		X	X	X		X											
ZZZZZZ	VR30B	5.00	09360																														
ZZZZZZ	VR30D	5.00	09400																														
ZZZZZZ	VR30E	5.00	09440																														
ZZZZZZ	VR30F	5.00	09480																														
ZZZZZZ	VR30G	5.00	09520																														
ZZZZZZ	VR30H	5.00	09560																														
CCV	CCV2	1.00	10000			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10050			X			X		X					X		X	X	X		X											
SA2-8CL	VR32A-L	25.00	10091			X			X		X					X		X	X	X		X											
SA2-8C	VR32A	5.00	10131			X			X		X					X		X	X	X		X											
SA2-8CD	VR32ADUP	5.00	10171			X			X		X					X		X	X	X		X											
SA2-8CS	VR32ASPK	5.00	10212			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	5.00	10250																														
SA3-6C	VR32L	5.00	10280			X			X		X					X		X	X	X		X											
CCV	CCV3	1.00	10321			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	10361			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	10403			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	10445			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	10490			X			X		X					X		X	X	X		X											
CCV	CCV4	1.00	10525			X			X		X					X		X	X	X		X											
CCB	CCB4	1.00	10575			X			X		X					X		X	X	X		X											

FORM XIV

VR32:00699

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia   INSTRUMENT ID: NEXION 300D MS   START DATE: 11/15/2012

SDG: VR32   RUNID: MS111511   METHOD: PMS   END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11590		X		X					X	X	X	X								X	X	X	X				X		X	X
S1	S1	1.00	12030		X		X					X	X	X	X								X	X	X	X				X		X	X
S2	S2	1.00	12070		X		X					X	X	X	X								X	X	X	X				X		X	X
S3	S3	1.00	12110		X		X					X	X	X	X								X	X	X	X				X		X	X
S4	S4	1.00	12160		X		X					X	X	X	X								X	X	X	X				X		X	X
S5	S5	1.00	12220																														
ZZZZZZ	Rinse samp1	1.00	12290																														
ZZZZZZ	ZZZZZZ	1.00	12370																														
ICV	MICV	1.00	12450		X		X					X	X	X	X								X	X	X	X				X		X	X
ICB	ICB	1.00	12540		X		X					X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV1	1.00	12580		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB1	1.00	13050		X		X					X	X	X	X								X	X	X	X				X		X	X
CRI	MCRI	1.00	13090		X		X					X	X	X	X								X	X	X	X				X		X	X
ICSA	ICSAI	1.00	13130		X		X					X	X	X	X								X	X	X	X				X		X	X
ICSAB	ICSABI	1.00	13190		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	LR200	1.00	13260																														
ZZZZZZ	LR300	1.00	13330																														
ZZZZZZ	B1	1.00	13400																														
ZZZZZZ	B2	1.00	13460																														
ZZZZZZ	B3	1.00	13520																														
CCV	MCCV2	1.00	13560		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB2	1.00	14030		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31MB1	20.00	14070																														
ZZZZZZ	VR31MB1SPK	20.00	14110																														
ZZZZZZ	VR31A-L	100.00	14160																														
ZZZZZZ	VR31A	20.00	14200																														
ZZZZZZ	VR31ADUP	20.00	14240																														
ZZZZZZ	VR31ASPK	20.00	14280																														
ZZZZZZ	VR31APOST	20.00	14320																														
ZZZZZZ	VR31C	20.00	14360																														
ZZZZZZ	VR31D	20.00	14410																														
ZZZZZZ	VR31E	20.00	14450																														
CCV	MCCV3	1.00	14500		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB3	1.00	14560		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31J	20.00	15150																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia   INSTRUMENT ID: NEXION 300D MS   START DATE: 11/15/2012

SDG: VR32   RUNID: MS111511   METHOD: PMS   END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR31F	20.00	15190																														
ZZZZZZ	VR31H	20.00	15240																														
ZZZZZZ	VR31K	100.00	15280																														
ZZZZZZ	VR31K	20.00	15320																														
ZZZZZZ	VR31L	20.00	15360																														
ZZZZZZ	VR31I	20.00	15420																														
ZZZZZZ	VR31G	20.00	15460																														
ZZZZZZ	VR31B	400.00	15500																														
ZZZZZZ	VR31B	20.00	15540																														
CCV	MCCV4	1.00	15580		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB4	1.00	16050		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR30MB1	20.00	16120																														
ZZZZZZ	VR30MB1SPK	20.00	16160																														
ZZZZZZ	VR30A-L	100.00	16210																														
ZZZZZZ	VR30A	20.00	16250																														
ZZZZZZ	VR30ADUP	20.00	16290																														
ZZZZZZ	VR30ASPK	20.00	16330																														
ZZZZZZ	VR30APOST	20.00	16370																														
ZZZZZZ	VR30B	20.00	16410																														
ZZZZZZ	VR30C	20.00	16460																														
ZZZZZZ	VR30D	20.00	16500																														
CCV	MCCV5	1.00	16550		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB5	1.00	17020		X		X					X	X	X	X								X	X	X	X				X		X	X
PBS	VR32MB1	20.00	17070		X		X					X	X	X	X								X	X	X	X				X		X	X
LCSS	VR32MB1SPK	20.00	17110		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR30E	20.00	17160																														
ZZZZZZ	VR30F	20.00	17200																														
ZZZZZZ	VR30G	20.00	17240																														
ZZZZZZ	VR30H	20.00	17280																														
ZZZZZZ	VR30I	20.00	17320																														
ZZZZZZ	VR30J	20.00	17360																														
ZZZZZZ	VR30K	20.00	17410																														
ZZZZZZ	VR30L	20.00	17450																														
CCV	MCCV6	1.00	17500		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB6	1.00	17560		X		X					X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: NEXION 300D MS START DATE: 11/15/2012

SDG: VR32 RUNID: MS111511 METHOD: PMS END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	18020		X		X					X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV7	1.00	18060		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB7	1.00	18130		X		X					X	X	X	X								X	X	X	X				X		X	X
SA2-8CL	VR32A-L	100.00	18180				X					X	X	X	X								X	X	X	X				X		X	X
SA2-8C	VR32A	20.00	18220				X					X	X	X	X								X	X	X	X				X		X	X
SA2-8CD	VR32ADUP	20.00	18260				X					X	X	X	X								X	X	X	X				X		X	X
SA2-8CS	VR32ASPK	20.00	18300				X					X	X	X	X								X	X	X	X				X		X	X
SA2-8CA	VR32APOST	20.00	18340																						X								
SA2-Field Duplicat	VR32B	20.00	18390				X					X	X	X	X								X	X	X	X				X		X	X
SA3-1C	VR32C	20.00	18430				X					X	X	X	X								X	X	X	X				X		X	X
SA3-2C	VR32D	20.00	18470				X					X	X	X	X								X	X	X	X				X		X	X
SA3-3C	VR32E	20.00	18520				X					X			X								X	X	X	X				X			X
SA3-4C	VR32F	20.00	18560				X					X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV8	1.00	19000		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB8	1.00	19070		X		X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR33MB1	20.00	19110																														
ZZZZZZ	VR33MB1SPK	20.00	19160																														
SA3-4P-1(0 to 3	VR32G	20.00	19200				X					X	X	X	X								X	X	X	X				X		X	X
SA3-4P-2(3 to 6	VR32H	20.00	19240				X					X	X	X	X								X	X	X	X				X		X	X
SA3-4P-3(6 to 12	VR32I	20.00	19280				X					X	X	X	X								X	X	X	X				X		X	X
SA3-4P-4(12 to 24	VR32J	20.00	19320				X					X	X	X	X								X	X	X	X				X		X	X
SA3-5C	VR32K	20.00	19360				X					X	X	X	X								X	X	X	X				X		X	X
SA3-6C	VR32L	20.00	19400				X					X			X								X		X	X				X			
ZZZZZZ	VR33B	20.00	19450																														
ZZZZZZ	VR33C	20.00	19500																														
CCV	MCCV9	1.00	19540		X		X					X	X	X	X								X	X	X	X				X		X	X
CCB	CCB9	1.00	20010		X		X					X	X	X	X								X	X	X	X				X		X	X

VR32 : 00272

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia　　INSTRUMENT ID: NEXION 300D MS　　START DATE: 11/16/2012

SDG: VR32　　RUNID: MS111611　　METHOD: PMS　　END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	14450							X			X	X										X								X	X
S1	S1	1.00	14490							X			X	X										X								X	X
S2	S2	1.00	14540							X			X	X										X								X	X
S3	S3	1.00	14580							X			X	X										X								X	X
S4	S4	1.00	15030							X			X	X										X								X	X
S5	S5	1.00	15090																														
ZZZZZZ	Rinse sampl	1.00	15160																														
ICV	MICV	1.00	15220							X			X	X										X								X	X
ICB	ICB	1.00	15290							X			X	X										X								X	X
CCV	MCCV1	1.00	15330							X			X	X										X								X	X
CCB	CCB1	1.00	15400							X			X	X										X								X	X
CRI	MCRI	1.00	15440							X			X	X										X								X	X
ZZZZZZ	ZZZZZZ	1.00	15480																														
ICSAB	ICSABI	1.00	15550							X			X	X										X								X	X
ZZZZZZ	LR200	1.00	16020																														
ZZZZZZ	LR300	1.00	16090																														
ZZZZZZ	B1	1.00	16150																														
ZZZZZZ	B2	1.00	16210																														
ICSA	ICSAI	1.00	16270							X			X	X										X								X	X
ZZZZZZ	B3	1.00	16320																														
CCV	MCCV2	1.00	16370							X			X	X										X								X	X
CCB	CCB2	1.00	16440							X			X	X										X								X	X
PBS	VR32MB1	20.00	16480							X																							
LCSS	VR32MB1SPK	20.00	16520							X																							
ZZZZZZ	VR30E	20.00	16560																														
ZZZZZZ	VR30F	20.00	17010																														
ZZZZZZ	VR30G	20.00	17050																														
ZZZZZZ	VR30H	20.00	17090																														
ZZZZZZ	VR30I	20.00	17130																														
ZZZZZZ	VR30J	20.00	17170																														
ZZZZZZ	VR30K	20.00	17220																														
ZZZZZZ	VR30L	20.00	17260																														
CCV	MCCV3	1.00	17310							X			X	X										X								X	X
CCB	CCB3	1.00	17370							X			X	X										X								X	X
SA2-8CL	VR32A-L	100.00	17430							X																							

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: NEXION 300D MS START DATE: 11/16/2012

SDG: VR32 RUNID: MS111611 METHOD: PMS END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA2-8C	VR32A	20.00	17470							X																							
SA2-8CD	VR32ADUP	20.00	17510							X																							
SA2-8CS	VR32ASPK	20.00	17550							X																							
SA2-Field Duplicat	VR32B	20.00	17590							X																							
SA3-1C	VR32C	20.00	18030							X																							
SA3-2C	VR32D	20.00	18090							X																							
SA3-3C	VR32E	100.00	18130										X	X																		X	
SA3-4C	VR32F	20.00	18170							X																							
SA3-4P-1(0 to 3	VR32G	20.00	18210							X																							
CCV	MCCV4	1.00	18250							X			X	X										X								X	X
CCB	CCB4	1.00	18320							X			X	X										X								X	X
ZZZZZZ	VR33MB1	20.00	18380																														
ZZZZZZ	VR33MB1SPK	20.00	18420																														
SA3-4P-2(3 to 6	VR32H	20.00	18460							X																							
SA3-4P-3(6 to 12	VR32I	20.00	18500							X																							
SA3-4P-4(12 to 24	VR32J	20.00	18550							X																							
SA3-5C	VR32K	20.00	18590							X																							
SA3-6C	VR32L	100.00	19030																					X									X
SA3-6C	VR32L	20.00	19070							X																							
ZZZZZZ	VR33B	20.00	19120																														
ZZZZZZ	VR33C	20.00	19160																														
CCV	MCCV5	1.00	19200							X			X	X										X								X	X
CCB	CCB5	1.00	19270							X			X	X										X								X	X
ZZZZZZ	VR33A-L	500.00	19350																														
ZZZZZZ	VR33A	100.00	19390																														
ZZZZZZ	VR33ADUP	100.00	19430																														
ZZZZZZ	VR33ASPK	100.00	19480																														
ZZZZZZ	VR33C	100.00	19520																														
ZZZZZZ	VR33E	100.00	19560																														
ZZZZZZ	VR33I	20.00	20000																														
ZZZZZZ	VR33J	100.00	20040																														
ZZZZZZ	VR33J	20.00	20090																														
SA3-3C	VR32E	20.00	20130							X																							
CCV	MCCV6	1.00	20180							X			X	X										X								X	X
CCB	CCB6	1.00	20240							X			X	X										X								X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

INSTRUMENT ID: NEXION 300D MS

START DATE: 11/19/2012

SDG: VR32

RUNID: MS111911

METHOD: PMS

END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	12460		X								X	X																		X	
S1	S1	1.00	12500		X								X	X																		X	
S2	S2	1.00	12540		X								X	X																		X	
S3	S3	1.00	12590		X								X	X																		X	
S4	S4	1.00	13030		X								X	X																		X	
S5	S5	1.00	13090																														
ZZZZZZ	Rinse sampl	1.00	13160																														
ICV	MICV	1.00	13230		X								X	X																		X	
ICB	ICB	1.00	13300		X								X	X																		X	
CCV	MCCV1	1.00	13340		X								X	X																		X	
CCB	CCB1	1.00	13410		X								X	X																		X	
CRI	MCRI	1.00	13450		X								X	X																		X	
ICSA	ICSAI	1.00	13490		X								X	X																		X	
ICSAB	ICSABI	1.00	13550		X								X	X																		X	
ZZZZZZ	LR200	1.00	14020																														
ZZZZZZ	LR300	1.00	14090																														
ZZZZZZ	B1	1.00	14160																														
ZZZZZZ	B2	1.00	14220																														
ZZZZZZ	B3	1.00	14280																														
CCV	MCCV2	1.00	14320		X								X	X																		X	
CCB	CCB2	1.00	14390		X								X	X																		X	
SA2-8CL	VR32A-L	100.00	14460		X																												
SA2-8C	VR32A	20.00	14500		X																												
SA2-8CD	VR32ADUP	20.00	14540		X																												
SA2-8CS	VR32ASPK	20.00	14580		X																												
SA2-Field Duplicat	VR32B	20.00	15020		X																												
SA3-1C	VR32C	20.00	15060		X																												
SA3-2C	VR32D	20.00	15100		X																												
SA3-3C	VR32E	20.00	15150		X																												
SA3-4C	VR32F	20.00	15200		X																												
SA3-4P-1(0 to 3	VR32G	20.00	15240		X																												
CCV	MCCV3	1.00	15280		X								X	X																		X	
CCB	CCB3	1.00	15350		X								X	X																		X	
ZZZZZZ	VR33MB1	20.00	15410																														
ZZZZZZ	VR33MB1SPK	20.00	15450																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111911 METHOD: PMS

START DATE: 11/19/2012

END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA3-4P-2(3 to 6	VR32H	20.00	15490		X																												
SA3-4P-3(6 to 12	VR32I	20.00	15530		X																												
SA3-4P-4(12 to 24	VR32J	20.00	15570		X																												
SA3-5C	VR32K	20.00	16010		X																												
SA3-6C	VR32L	100.00	16070										X	X																		X	
SA3-6C	VR32L	20.00	16110		X																												
ZZZZZZ	VR33C	100.00	16150																														
ZZZZZZ	VR33C	20.00	16190																														
CCV	MCCV4	1.00	16230		X								X	X																		X	
CCB	CCB4	1.00	16300		X								X	X																		X	

VR32:00075

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR32 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	06462														X																
S0.1	S0.1	1.00	06475														X																
S0.5	S0.5	1.00	06493														X																
S1	S1	1.00	06511														X																
S2	S2	1.00	06524														X																
S5	S5	1.00	06542														X																
S10	S10	1.00	06560														X																
ICV	AICV	1.00	07050														X																
ICB	ICB	1.00	07063														X																
CCV	ACCV1	1.00	07081														X																
CCB	CCB1	1.00	07095														X																
CRA	CRA	1.00	07113														X																
ZZZZZZ	VS18MB1	1.00	07130																														
ZZZZZZ	VS18MB1SPK	1.00	07144																														
ZZZZZZ	VS18A	1.00	07161																														
ZZZZZZ	VS18ADUP	1.00	07175																														
ZZZZZZ	VS18ASPK	1.00	07193																														
ZZZZZZ	VS18B	1.00	07210																														
ZZZZZZ	VS18C	1.00	07224																														
ZZZZZZ	VS18D	1.00	07242																														
ZZZZZZ	VS18E	1.00	07260																														
CCV	ACCV2	1.00	07274														X																
CCB	CCB2	1.00	07292														X																
ZZZZZZ	VS18F	1.00	07310																														
ZZZZZZ	VS18G	1.00	07323																														
ZZZZZZ	VS18H	1.00	07341																														
ZZZZZZ	VS18I	1.00	07354																														
ZZZZZZ	VS18J	1.00	07372																														
ZZZZZZ	VS18K	1.00	07385																														
ZZZZZZ	VS18L	1.00	07403																														
ZZZZZZ	VR37MB1	1.00	07421																														
ZZZZZZ	VR37MB1SPK	1.00	07434																														
ZZZZZZ	VR37A	1.00	07452																														
CCV	ACCV3	1.00	07470														X																
CCV	ACCV4	1.00	07584														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	08002														X																
ZZZZZZ	VS18F	1.00	08020																														
ZZZZZZ	VS18G	1.00	08033																														
ZZZZZZ	VS18H	1.00	08051																														
ZZZZZZ	VS18I	1.00	08064																														
ZZZZZZ	VS18J	1.00	08082																														
ZZZZZZ	VS18K	1.00	08095																														
ZZZZZZ	VS18L	1.00	08113																														
ZZZZZZ	VR37MB1	1.00	08131																														
ZZZZZZ	VR37MB1SPK	1.00	08144																														
ZZZZZZ	VR37A	1.00	08162																														
CCV	ACCV5	1.00	08180														X																
CCB	CCB4	1.00	08194														X																
ZZZZZZ	VR37ADUP	1.00	08212																														
ZZZZZZ	VR37ASPK	1.00	08230																														
ZZZZZZ	VR37B	1.00	08243																														
ZZZZZZ	VR37C	1.00	08261																														
ZZZZZZ	VR37D	1.00	08274																														
ZZZZZZ	VR37E	1.00	08292																														
ZZZZZZ	VR37F	1.00	08310																														
ZZZZZZ	VR37G	1.00	08323																														
ZZZZZZ	VR37H	1.00	08341																														
ZZZZZZ	VR37I	1.00	08355																														
CCV	ACCV6	1.00	08373														X																
CCB	CCB5	1.00	08391														X																
ZZZZZZ	VR37J	1.00	08404																														
ZZZZZZ	VR37K	1.00	08422																														
ZZZZZZ	VR37L	1.00	08440																														
ZZZZZZ	VR37M	1.00	08454																														
ZZZZZZ	VR37N	1.00	08472																														
ZZZZZZ	VR37O	1.00	08485																														
ZZZZZZ	VR58MB1	1.00	08503																														
ZZZZZZ	VR58MB1SPK	1.00	08520																														
ZZZZZZ	VR58A	1.00	08534																														
ZZZZZZ	VR58ADUP	1.00	08552																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR32

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	08565														X																
CCB	CCB6	1.00	08584														X																
ZZZZZZ	VR58ASPK	1.00	09001																														
ZZZZZZ	VR58B	1.00	09015																														
ZZZZZZ	VR58C	1.00	09033																														
ZZZZZZ	VR58D	1.00	09051																														
ZZZZZZ	VR58E	1.00	09065																														
ZZZZZZ	VR58F	1.00	09082																														
ZZZZZZ	VR58G	1.00	09100																														
ZZZZZZ	VR58H	1.00	09114																														
ZZZZZZ	VR58I	1.00	09131																														
ZZZZZZ	VR58J	1.00	09145																														
CCV	ACCV8	1.00	09163														X																
CCB	CCB7	1.00	09181														X																
ZZZZZZ	VR82A	1.00	09195																														
ZZZZZZ	VR82B	1.00	09213																														
ZZZZZZ	VR82C	1.00	09230																														
ZZZZZZ	VR82D	1.00	09244																														
ZZZZZZ	VR82E	1.00	09262																														
ZZZZZZ	VR82F	1.00	09280																														
ZZZZZZ	VR82G	1.00	09294																														
ZZZZZZ	VR82H	1.00	09311																														
ZZZZZZ	VR82I	1.00	09325																														
CCV	ACCV9	1.00	09343														X																
CCB	CCB8	1.00	09361														X																
ZZZZZZ	VR30MB1	1.00	09382																														
ZZZZZZ	VR30MB1SPK	1.00	09395																														
ZZZZZZ	VR30A	1.00	09413																														
ZZZZZZ	VR30ADUP	1.00	09430																														
ZZZZZZ	VR30ASPK	1.00	09444																														
ZZZZZZ	VR30B	1.00	09461																														
ZZZZZZ	VR30C	1.00	09475																														
ZZZZZZ	VR30D	1.00	09492																														
ZZZZZZ	VR30E	1.00	09510																														
ZZZZZZ	VR30F	1.00	09524																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR32 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV10	1.00	09542														X																
CCB	CCB9	1.00	09560														X																
ZZZZZZ	VR30G	1.00	09574																														
ZZZZZZ	VR30H	1.00	09592																														
ZZZZZZ	VR30I	1.00	10005																														
ZZZZZZ	VR30J	1.00	10023																														
ZZZZZZ	VR30K	1.00	10040																														
ZZZZZZ	VR30L	1.00	10054																														
ZZZZZZ	VR36MB1	1.00	10072																														
ZZZZZZ	VR36MB1SPK	1.00	10085																														
ZZZZZZ	VR36A	1.00	10103																														
ZZZZZZ	VR36ADUP	1.00	10121																														
CCV	ACCV11	1.00	10134														X																
CCB	CCB10	1.00	10152														X																
ZZZZZZ	VR36ASPK	1.00	10170																														
ZZZZZZ	VR36B	1.00	10184																														
ZZZZZZ	VR36C	1.00	10202																														
ZZZZZZ	VR36D	1.00	10220																														
ZZZZZZ	VR36E	1.00	10234																														
ZZZZZZ	VR36F	1.00	10251																														
ZZZZZZ	VR36G	1.00	10265																														
ZZZZZZ	VR36H	1.00	10282																														
ZZZZZZ	VR36I	1.00	10300																														
ZZZZZZ	VR36J	1.00	10314																														
CCV	ACCV12	1.00	10331														X																
CCB	CCB11	1.00	10345														X																
ZZZZZZ	VR36K	1.00	10363																														
ZZZZZZ	VR36L	1.00	10381																														
ZZZZZZ	VR35MB1	1.00	10395																														
ZZZZZZ	VR35MB1SPK	1.00	10413																														
ZZZZZZ	VR35A	1.00	10431																														
ZZZZZZ	VR35ADUP	1.00	10444																														
ZZZZZZ	VR35ASPK	1.00	10462																														
ZZZZZZ	VR35B	1.00	10480																														
ZZZZZZ	VR35C	1.00	10493																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR32 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR35D	1.00	10511																														
CCV	ACCV13	1.00	10525														X																
CCB	CCB12	1.00	10543														X																
ZZZZZZ	VR35E	1.00	10561																														
ZZZZZZ	VR35F	1.00	10574																														
ZZZZZZ	VR35G	1.00	10592																														
ZZZZZZ	VR35H	1.00	11010																														
ZZZZZZ	VR35I	1.00	11024																														
ZZZZZZ	VR35J	1.00	11042																														
ZZZZZZ	VR35K	1.00	11060																														
ZZZZZZ	VR35L	1.00	11073																														
CCV	ACCV14	1.00	11091														X																
CCB	CCB13	1.00	11110														X																
PBW	VR32MB1	1.00	11130														X																
LCSW	VR32MB1SPK	1.00	11143														X																
SA2-8C	VR32A	1.00	11161														X																
SA2-8CD	VR32ADUP	1.00	11174														X																
SA2-8CS	VR32ASPK	1.00	11192														X																
SA2-Field Duplicat	VR32B	1.00	11210														X																
SA3-1C	VR32C	1.00	11223														X																
SA3-2C	VR32D	1.00	11241														X																
SA3-3C	VR32E	1.00	11255														X																
SA3-4C	VR32F	1.00	11272														X																
CCV	ACCV15	1.00	11290														X																
CCB	CCB14	1.00	11304														X																
SA3-4P-1(0 to 3	VR32G	1.00	11322														X																
SA3-4P-2(3 to 6	VR32H	1.00	11340														X																
SA3-4P-3(6 to 12	VR32I	1.00	11354														X																
SA3-4P-4(12 to 24	VR32J	1.00	11371														X																
SA3-5C	VR32K	1.00	11385														X																
SA3-6C	VR32L	1.00	11402														X																
ZZZZZZ	VR65MB1	1.00	11420																														
ZZZZZZ	VR65MB1SPK	1.00	11434																														
ZZZZZZ	VR65A	1.00	11451																														
ZZZZZZ	VR65ADUP	1.00	11465																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR32 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV16	1.00	11483														X																
CCB	CCB15	1.00	11501														X																

VR32.0002

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: VR32

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-8C
ARI ID: 12-22189 VR32A

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.26
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.50
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.14

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA2-Field Duplicate
ARI ID: 12-22190 VR32B

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.27
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.90
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	3.28

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Client ID: SA3-1C
ARI ID: 12-22191 VR32C

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.97
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.30
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	1.76

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-2C
ARI ID: 12-22192 VR32D

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.58
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.50
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	1.98

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-3C
ARI ID: 12-22193 VR32E

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.26
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.50
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.42

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-4C
ARI ID: 12-22194 VR32F

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.87
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.80
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.42

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-4P-1(0 to 3" depth)
ARI ID: 12-22195 VR32G

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.69
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.20
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.36

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-4P-2(3 to 6" depth)
ARI ID: 12-22196 VR32H

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.80
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.30
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	1.69

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-4P-3(6 to 12" depth)
ARI ID: 12-22197 VR32I

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.91
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.50
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	0.989

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-4P-4(12 to 24" depth)
ARI ID: 12-22198 VR32J

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.89
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	99.20
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	0.510

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-5C
ARI ID: 12-22199 VR32K

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	6.58
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.40
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	2.17

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-6C
ARI ID: 12-22200 VR32L

Analyte	Date	Method	Units	RL	Sample
pH	11/13/12 111312#1	SW9045	std units	0.01	5.63
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.50
Total Organic Carbon	11/21/12 112112#1	Plumb,1981	Percent	0.020	6.97

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

METHOD BLANK RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/12/12	Percent	< 0.01 U
Total Organic Carbon	11/21/12	Percent	< 0.020 U

LAB CONTROL RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SW9045	ICVL	11/13/12	std units	7.03	7.00	0.03
Total Organic Carbon Plumb,1981	ICVL	11/21/12	Percent	0.106	0.100	106.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	11/21/12	Percent	2.89	2.99	96.7%

REPLICATE RESULTS-CONVENTIONALS
VR32-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/26/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 10/31/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR32A Client ID: SA2-8C					
pH	11/13/12	std units	6.26	6.24	0.02

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

Total Solids

ARI Job ID: VR32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section METALS

Oven Identification: 07 Balance ID: B116132369

Samples in Oven: Date: 11-14-12 Time: 1212 Temp: 107°C Analyst: NB

Removed from Oven: Date: 11-15-12 Time: 0745 Temp: 101°C Analyst: [illegible]

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
VR32 A	0.962	10.835	10.520	–	√
" B	1.001	10.791	10.497	–	√
" C	0.986	10.758	10.440	–	√
" D	0.989	10.197	9.908	–	√
" E	1.004	10.172	9.871	–	√
" F	1.015	10.776	10.511	–	√
" G	0.979	10.681	10.463	–	√
" H	0.984	10.154	9.953	–	√
" I	1.030	10.103	9.926	–	√
" J	0.949	10.703	10.579	–	√
" K	1.009	10.780	10.577	–	√
" L	0.982	10.330	9.751	–	√
		NB 11-14-12			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VR32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: NB

Date: 11-14-12

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID VR32ASPK, MBSPK

	Prepcode	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.	2727-9		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200 ✓	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000 ✓	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200 ✓	200	
	K	1000 ✓	1000	
	Mg	1000 ✓	1000	
	Mn	50	50	
	Na	1000 ✓	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	SWN ICP-MS #1	SWN ICP-MS #2	ICP-MS Minerals
	2987-2	2996 7	
	1.0	1.0	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25 ✓		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25 ✓		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25 ✓		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25 ✓		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	2903-7
Hg MBSPK	SMM	CVA	1.0	0.10	2903-7
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM Matrix: SOIL
Analyst: NB Date: 11-14-12
Bath Temp: 93°C Start Time: 1342 End Time: 1412

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR32A	1	—	0.733	50	11-18 1	YES	
" ADUP	1	—	0.732		1		
" ASPK	1	—	0.736		1		
" B	1	—	0.708		1		
" C	1	—	0.721		1		
" D	1	—	0.717		1		
" E	1	—	0.719		1		
" F	1	—	0.735		1		
" G	1	—	0.748		1		
" H	1	—	0.718		1		
" I	1	—	0.733		1		
" J	1	—	0.715		1		
" K	1	—	0.748		1		
" L	1	—	0.737		1		
" MBI	—	—	—	↓	1		
" MBSPK	—	—	—	50	1	↓	

NB 11-14-12

Chemical/Reagent ID:

HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 1205258

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: NB Date: 11-14-12 Time: 1255

Matrix: SOIL Block ID: SWC: #5 / SWN: #4 Block Temp: SWC: 90°C / SWN: 90°C Thermometer: SWC: MP8 / SWN: MP44

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR32A	1	—	1.089	50.0	1.035	50.0	
" ADUP	1	—	1.093		1.033		
" ASPK	1	—	1.090		1.033		
" B	1	—	1.098		1.074		
" C	1	—	1.058		1.082		
" D	1	—	1.051		1.073		
" E	1	—	1.042		1.074		
" F	1	—	1.048		1.044		
" G	1	—	1.068		1.082		
" H	1	—	1.011		1.004		
" I	1	—	1.028		1.007		
" J	1	—	1.037		1.054		
" K	1	—	1.054		1.039		
" L	1	—	1.061		1.076		
" MB1	—	—	—		—		
" MB1SPK	—	—	—		—	50.0	
VR30G	1	—	1.079				
" J	1	—	1.085				
" K	1	—	1.023		NB 11-14-12		
" L	1	—	1.081				
NB 11-14-12* " MB2	—	—	—		*		
" MB2SPK	—	—	—	50.0	*		
				NB 11-14-12			

Chemical/Reagent ID:

HNO_3: MP2390/I7833 HCl: I7676 H_2O_2: I7845 Tube Lot #: 1207143

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	VR32
Unacceptable Blank:	☐	Date of Event:	11.15.12
Unacceptable Duplicate:	☐	Client ID:	Hart Crowser, Inc
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

A: Ø ppb Sb — A: 210.322 ppb Zn

ASPK: 1.284 ppb Sb — %R = 5.1 — ASPK: 269.443 ppb Zn — %R = 74.4

post-spike OK

(see attached)

A-L (100x): 5.733 ppb V

A (20x): 25.758 ppb V — 11.3% difference

Samples Affected:

Corrective Action Taken:

11/19/12

Analyst Initials: MJT — **Supervisor:**

Date: 11.16.12 — **Date:**

5049F

Revision 007
6/11/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory
Analyst Notes

ARI Job No.: VR32

Client ID: Hart Crowser

Parameter: ICP

Client Project: Upper Columbia

List problems, concerns, corrective actions and any other pertinent information
CCB9 Al, Fe, Mn > RL, rerun immediately and and all clean (CCB10). All samples bracketed reported.

Analyst Initials:	RJA	Date:	11/19/12

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)								VR32 A	
		icpms						11.16.12 mJT	
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.033	1.035			SAMP WT	1.033	1.0350		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l				ug/l	ug/l	mg/L	#VALUE!
Be			#VALUE!		Be			25	0
Na			#DIV/0!		Na			5000	0
Mg			#VALUE!		Mg			5000	#VALUE!
Al			#VALUE!		Al			5000	#VALUE!
K			#DIV/0!		K			5000	0
Ca			#DIV/0!		Ca			5000	0
V	29.486	25.758	13.69		V	55.618	25.758	25	119.6391
Cr	29.958	30.35	1.11		Cr	56.087	30.35	25	103.18259
Fe			#VALUE!		Fe			5000	#VALUE!
Mn			#VALUE!		Mn			25	#VALUE!
Co	8.706	8.537	2.15		Co	33.51	8.537	25	99.957986
Ni	31.845	31.745	0.51		Ni	56.296	31.745	25	98.449372
Cu	17.7300	17.622	0.80		Cu	42.232	17.622	25	98.576209
Zn	204.494	210.322	2.62		Zn	269.443	210.322	80	74.409274
As	15.373	16.254	5.38		As	39.077	16.254	25	91.417635
Se	0	0	#DIV/0!		Se	74.037	0	80	92.54625
Mo			#VALUE!		Mo			25	#VALUE!
Ag			#VALUE!		Ag			25	#VALUE!
Cd	1.882	2.073	9.47		Cd	26.722	2.073	25	98.612023
Sb	0	0	#DIV/0!		Sb	1.284	0	25	5.136
Ba			#VALUE!		Ba			25	#VALUE!
Tl	0	0	#DIV/0!		Tl	25.188	0	25	100.752
Pb	54.65	59.595	8.46		Pb	80.699	59.595	25	84.876638

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VR32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-15-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Sl. noisy
		3			-5
		4			-6
		5			-7
		ICV			2988-6
		ICB			
		CAI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VS40 MB1	SWC	2	
		B		5	High Ca ⇒ extra dil's
		C			
		D			
		E			
	✓	F			(Ca>BR)
		ADUP			
		A			
		ASPK		✓	Pb-C.A.
		MB1SPK		2 ✓	
		CCV2			
		CCB2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-15-12 Analyst: BA

LR Date: — Page: 2 of 5

All corrections made by analyst unless otherwise noted. BA 11/16/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VS40 G	SWC	5	
	✓	H			Ca > LR
	✓	I			
	✓	J			
		F		10	
		CCV3			
		CCB3			
		VS40 H	SWC	10	
		I			
		J			
		CCV4			
		CCB4			
		VB30 MB1	SWC	2	
	✓	B			Fe > LR
		C			
	✓	D			Al > LR
		A-L			
		A			
		ADUP		✓	
		ASPK		✓	Al, Ca, Fe, Mg STL
		~~ZZZZZZ~~ APOST		✓	Al, Ca, Fe, Mg STL
		MB1SPK		✓	
		CCV5			
		CCB5			

VB32 : 00111

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-15-12 Analyst: BA

LR Date: — Page: 3 of 5

All corrections made by analyst unless otherwise noted. BA 11/14/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR30 MB2	SWC	2	
	✓	E			Al, Fe > LR
	✓	F			
	✓	G			
	✓	H			Al > LR
		I			
		J			
		K			
		L			
		MB2SPK			✓
		CCV6			
		CCB6			
		CRI			
		ICSA			
		ICSAB			
		CCV7			
		CCB7			End VR30
		CCV8			
		CCB8			
		VR32 MB1	SWC	2	
		B			
		C			
		D			
	✓	zzzzzz A-L		10	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-15-12 Analyst: BA

LR Date: — Page: 4 of 5

All corrections made by analyst unless otherwise noted. BA 11/16/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	VR32 A	SWC	2	Fe > LR
	✓	ADUP	↓	↓	↓
	✓	ASPK			
	✓	~~APOST~~			
		MBISPK		✓	
		CCV9			
		CCB9			Al, Fe, Mn > RL
		CCB10			
		VR32 E	SWC	2	
		F	↓	↓	
		G			
		H			
		I			
		J			
		K			
	✓	L	↓	↓	Fe > LR
		CCV10			
		CCB11			
		CRI			
		ICSA			
		ICSAB			
		CCV11			
		CCB12			End Pkg
—		VS40 MB2	LEN	5	BA 11/16/12

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-15-12

ICP-2	Analyst BA 11/16/12	Peer	Comment
Logbook:			
Analyst, Date, Method info	✓		
Sample ID's	✓		
Standard/QC solution ID's recorded	✓		
Prep codes	✓		
Dilution factors	✓		
Crossouts/Corrections/Deletions	✓		
Calibration:			
Blank & Standard intensities	✓		
Standard deviations	✓		
Curve fit	✓		
Calibration Verification:			
ICV/CCV	✓		
ICB/CCB	✓		See log - VR30, VR32
Samples:			
RSD's & SD's	✓		
Internal Standards	✓		
Carry-over	✓		See log
Method QC:			
CRI/CRA	✓		
ICSA/ICSAB	✓		
Post Spikes/Serial Dilutions	✓		See log
Analytic Spikes	—		
Matrix QC:			
SRM/LCS	✓		
Matrix Spikes	✓		See log
Matrix Duplicates	✓		
Method Blanks	✓		See log VR46
Data Distribution:			
Requested elements/isotope identified	✓		
Correct samples identified for distribution	✓		
Raw data match distributed data	✓		
Data filename correct	✓		
Necessary Analysts Notes and CAF's	✓		AN-VR46, VR30, VR32. CA-V540

==========

Analysis Begun

Start Time: 11/15/2012 8:44:09 AM **Plasma On Time: 11/15/2012 7:19:27 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank 1 **Date Collected: 11/15/2012 8:44:10 AM**
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Calib Units
ScA 357.253	2507773.8	3977.55	0.16%	100.0	%
ScR 361.383	325349.1	7706.85	2.37%	100.0	%
Ag 328.068†	-99.7	8.83	8.86%	[0.00]	mg/L
Al 308.215†	144.6	5.78	4.00%	[0.00]	mg/L
As 188.979†	-11.9	1.39	11.68%	[0.00]	mg/L
B 249.677†	39.5	2.52	6.38%	[0.00]	mg/L
Ba 233.527†	17.4	2.31	13.30%	[0.00]	mg/L
Be 313.042†	880.6	23.27	2.64%	[0.00]	mg/L
Ca 317.933†	171.6	19.29	11.24%	[0.00]	mg/L
Cd 228.802†	317.2	2.58	0.81%	[0.00]	mg/L
Co 228.616†	-86.4	1.10	1.28%	[0.00]	mg/L
Cr 267.716†	-85.1	8.25	9.69%	[0.00]	mg/L
Cu 324.752†	2385.2	26.38	1.11%	[0.00]	mg/L
Fe 273.955†	13.3	3.52	26.49%	[0.00]	mg/L
K 766.490†	517.4	3.77	0.73%	[0.00]	mg/L
Mg 279.077†	83.9	10.19	12.15%	[0.00]	mg/L
Mn 257.610†	142.9	1.87	1.31%	[0.00]	mg/L
Mo 202.031†	59.4	3.00	5.06%	[0.00]	mg/L
Na 589.592†	-283.1	9.79	3.46%	[0.00]	mg/L
Na 330.237†	-215.7	8.90	4.12%	[0.00]	mg/L
Ni 231.604†	-25.6	2.36	9.20%	[0.00]	mg/L
Pb 220.353†	63.0	2.56	4.07%	[0.00]	mg/L
Sb 206.836†	59.7	7.13	11.95%	[0.00]	mg/L
Se 196.026†	-49.4	3.18	6.43%	[0.00]	mg/L
Si 288.158†	64.2	14.28	22.27%	[0.00]	mg/L
Sn 189.927†	-2.6	2.62	101.36%	[0.00]	mg/L
Sr 421.552†	312.6	37.05	11.85%	[0.00]	mg/L
Ti 334.903†	-55.2	11.60	21.02%	[0.00]	mg/L
Tl 190.801†	-39.5	0.97	2.46%	[0.00]	mg/L
V 292.402†	145.8	6.26	4.30%	[0.00]	mg/L
Zn 206.200†	24.2	1.79	7.41%	[0.00]	mg/L

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Sequence No.: 2 **Autosampler Location: 2**
Sample ID: STD2 **Date Collected: 11/15/2012 8:48:24 AM**
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2597641.2	62481.84	2.41%	103.6	%
ScR 361.383	331338.9	9746.93	2.94%	101.8	%
Ba 233.527†	42438.2	1771.34	4.17%	[10]	mg/L
Cd 228.802†	298187.1	7514.95	2.52%	[10]	mg/L
Co 228.616†	325119.2	7965.67	2.45%	[10]	mg/L
Cr 267.716†	58337.9	2220.41	3.81%	[10]	mg/L
Cu 324.752†	2405838.9	59124.10	2.46%	[10]	mg/L
Mn 257.610†	338976.8	12342.25	3.64%	[10]	mg/L
V 292.402†	1220030.9	30922.81	2.53%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/15/2012 8:50:09 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2513550.2	8620.01	0.34%	100.2	%
ScR 361.383	323876.6	7853.05	2.42%	99.55	%
Ag 328.068†	166536.5	335.16	0.20%	[1.0]	mg/L
As 188.979†	17654.8	79.89	0.45%	[10]	mg/L
B 249.677†	73183.8	1382.25	1.89%	[10]	mg/L
Be 313.042†	3161166.1	86387.03	2.73%	[5.0]	mg/L
Na 589.592†	597803.8	15003.34	2.51%	[50]	mg/L
Ni 231.604†	38364.5	675.86	1.76%	[10]	mg/L
Pb 220.353†	76322.6	186.34	0.24%	[10]	mg/L
Se 196.026†	13924.1	61.32	0.44%	[10]	mg/L
Sr 421.552†	4386237.1	104992.89	2.39%	[5]	mg/L
Tl 190.801†	24018.1	66.26	0.28%	[10]	mg/L
Zn 206.200†	37848.8	625.34	1.65%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/15/2012 8:52:41 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2513078.8	18156.17	0.72%	100.2	%
ScR 361.383	328604.2	5697.20	1.73%	101.0	%
Mo 202.031†	189753.7	1267.32	0.67%	[10]	mg/L
Sb 206.836†	30950.9	147.60	0.48%	[10]	mg/L
Si 288.158†	20251.7	561.98	2.77%	[10]	mg/L
Sn 189.927†	36708.5	236.55	0.64%	[10]	mg/L
Ti 334.903†	194811.0	4695.61	2.41%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/15/2012 8:54:54 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2386623.9	6233.38	0.26%	95.17	%
ScR 361.383	325588.4	2852.64	0.88%	100.1	%
Al 308.215†	50666.2	806.02	1.59%	[30]	mg/L
Ca 317.933†	399607.2	8032.07	2.01%	[30]	mg/L
Fe 273.955†	121934.4	2636.67	2.16%	[100]	mg/L
K 766.490†	187111.1	3352.43	1.79%	[100]	mg/L
Mg 279.077†	41879.8	737.32	1.76%	[30]	mg/L
Na 330.237†	2723.2	50.21	1.84%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	166500	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1689	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1765	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7318	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4244	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	632200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13320	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	29820	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32510	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	5834	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	240600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1219	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1871	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1396	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	33900	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18980	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11960	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	27.23	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3836	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7632	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3095	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1392	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2025	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3671	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	877200	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	19480	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2402	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	122000	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3785	0.00000	1.000000	

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Analysis Begun

Start Time: 11/15/2012 8:58:48 AM **Plasma On Time: 11/15/2012 7:19:27 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 11/15/2012 8:58:49 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2526046.3	100.7	%	0.72				0.71%
ScR 361.383	320654.4	98.56	%	2.706				2.75%
Ag 328.068†	165044.9	0.9913	mg/L	0.01030	0.9913	mg/L	0.01030	1.04%
Al 308.215†	3493.0	2.034	mg/L	0.0541	2.034	mg/L	0.0541	2.66%
As 188.979†	3432.0	1.969	mg/L	0.0214	1.969	mg/L	0.0214	1.09%
B 249.677†	7177.0	0.9798	mg/L	0.02664	0.9798	mg/L	0.02664	2.72%
Ba 233.527†	4430.4	1.043	mg/L	0.0276	1.043	mg/L	0.0276	2.64%
Be 313.042†	596059.0	0.9426	mg/L	0.02577	0.9426	mg/L	0.02577	2.73%
Ca 317.933†	26016.9	1.953	mg/L	0.0583	1.953	mg/L	0.0583	2.99%
Cd 228.802†	31259.0	1.036	mg/L	0.0101	1.036	mg/L	0.0101	0.98%
Co 228.616†	32916.3	1.010	mg/L	0.0099	1.010	mg/L	0.0099	0.98%
Cr 267.716†	6061.4	1.038	mg/L	0.0255	1.038	mg/L	0.0255	2.45%
Cu 324.752†	250143.9	1.039	mg/L	0.0103	1.039	mg/L	0.0103	0.99%
Fe 273.955†	2529.5	2.067	mg/L	0.0560	2.067	mg/L	0.0560	2.71%
K 766.490†	37241.2	19.90	mg/L	0.671	19.90	mg/L	0.671	3.37%
Mg 279.077†	2843.2	2.044	mg/L	0.0529	2.044	mg/L	0.0529	2.59%
Mn 257.610†	33685.9	0.9941	mg/L	0.02705	0.9941	mg/L	0.02705	2.72%
Mo 202.031†	18640.6	0.9823	mg/L	0.00841	0.9823	mg/L	0.00841	0.86%
Na 589.592†	590412.2	49.38	mg/L	1.355	49.38	mg/L	1.355	2.74%
Na 330.237†	1431.9	52.48	mg/L	1.148	52.48	mg/L	1.148	2.19%
Ni 231.604†	3764.5	0.9815	mg/L	0.02506	0.9815	mg/L	0.02506	2.55%
Pb 220.353†	14374.9	1.884	mg/L	0.0151	1.884	mg/L	0.0151	0.80%
Sb 206.836†	6493.3	2.097	mg/L	0.0252	2.097	mg/L	0.0252	1.20%
Se 196.026†	2688.0	1.929	mg/L	0.0217	1.929	mg/L	0.0217	1.13%
Si 288.158†	4282.9	2.114	mg/L	0.0657	2.114	mg/L	0.0657	3.11%
Sn 189.927†	3700.3	1.009	mg/L	0.0082	1.009	mg/L	0.0082	0.81%
Sr 421.552†	848877.5	0.9677	mg/L	0.02758	0.9677	mg/L	0.02758	2.85%
Ti 334.903†	19993.1	1.025	mg/L	0.0293	1.025	mg/L	0.0293	2.86%
Tl 190.801†	4663.6	1.933	mg/L	0.0149	1.933	mg/L	0.0149	0.77%
V 292.402†	125233.2	1.031	mg/L	0.0103	1.031	mg/L	0.0103	1.00%
Zn 206.200†	3825.3	1.010	mg/L	0.0269	1.010	mg/L	0.0269	2.66%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/15/2012 9:02:53 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2556793.1	102.0	%	0.43				0.42%
ScR 361.383	325532.0	100.1	%	0.53				0.53%
Ag 328.068†	-17.8	-0.00011	mg/L	0.000133	-0.00011	mg/L	0.000133	124.81%
Al 308.215†	3.9	0.00227	mg/L	0.003504	0.00227	mg/L	0.003504	154.23%
As 188.979†	-0.3	-0.00016	mg/L	0.001636	-0.00016	mg/L	0.001636	999.24%
B 249.677†	38.2	0.00523	mg/L	0.001199	0.00523	mg/L	0.001199	22.94%
Ba 233.527†	-0.8	-0.00019	mg/L	0.001055	-0.00019	mg/L	0.001055	553.69%
Be 313.042†	221.6	0.00035	mg/L	0.000029	0.00035	mg/L	0.000029	8.22%
Ca 317.933†	-1.2	-0.00009	mg/L	0.000173	-0.00009	mg/L	0.000173	198.74%
Cd 228.802†	4.8	0.00016	mg/L	0.000085	0.00016	mg/L	0.000085	52.49%
Co 228.616†	7.5	0.00023	mg/L	0.000087	0.00023	mg/L	0.000087	38.29%
Cr 267.716†	-0.0	-0.00001	mg/L	0.001315	-0.00001	mg/L	0.001315	>999.9%
Cu 324.752†	84.7	0.00035	mg/L	0.000096	0.00035	mg/L	0.000096	27.35%
Fe 273.955†	7.6	0.00622	mg/L	0.001890	0.00622	mg/L	0.001890	30.41%
K 766.490†	17.7	0.00947	mg/L	0.015702	0.00947	mg/L	0.015702	165.76%
Mg 279.077†	5.6	0.00404	mg/L	0.005310	0.00404	mg/L	0.005310	131.37%
Mn 257.610†	10.3	0.00031	mg/L	0.000181	0.00031	mg/L	0.000181	59.29%
Mo 202.031†	33.9	0.00179	mg/L	0.000343	0.00179	mg/L	0.000343	19.20%
Na 589.592†	172.5	0.01443	mg/L	0.004650	0.01443	mg/L	0.004650	32.22%
Na 330.237†	-4.3	-0.1571	mg/L	0.17666	-0.1571	mg/L	0.17666	112.46%
Ni 231.604†	2.4	0.00064	mg/L	0.001090	0.00064	mg/L	0.001090	171.60%
Pb 220.353†	1.1	0.00014	mg/L	0.000587	0.00014	mg/L	0.000587	425.08%
Sb 206.836†	10.7	0.00346	mg/L	0.000454	0.00346	mg/L	0.000454	13.09%
Se 196.026†	3.3	0.00235	mg/L	0.004730	0.00235	mg/L	0.004730	201.15%
Si 288.158†	-9.9	-0.00488	mg/L	0.003778	-0.00488	mg/L	0.003778	77.49%
Sn 189.927†	4.5	0.00122	mg/L	0.000206	0.00122	mg/L	0.000206	16.93%
Sr 421.552†	310.6	0.00035	mg/L	0.000006	0.00035	mg/L	0.000006	1.77%
Ti 334.903†	22.6	0.00116	mg/L	0.000965	0.00116	mg/L	0.000965	83.19%
Tl 190.801†	1.7	0.00072	mg/L	0.001819	0.00072	mg/L	0.001819	253.52%
V 292.402†	29.6	0.00024	mg/L	0.000200	0.00024	mg/L	0.000200	82.37%
Zn 206.200†	1.8	0.00049	mg/L	0.000127	0.00049	mg/L	0.000127	25.99%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/15/2012 9:07:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2527023.3	100.8	%	0.30				0.29%
ScR 361.383	328762.0	101.0	%	0.57				0.57%
Ag 328.068†	493.5	0.00296	mg/L	0.000273	0.00296	mg/L	0.000273	9.21%
Al 308.215†	89.7	0.05293	mg/L	0.002048	0.05293	mg/L	0.002048	3.87%
As 188.979†	86.8	0.04927	mg/L	0.002452	0.04927	mg/L	0.002452	4.98%
B 249.677†	159.2	0.02175	mg/L	0.000452	0.02175	mg/L	0.000452	2.08%
Ba 233.527†	13.6	0.00320	mg/L	0.000208	0.00320	mg/L	0.000208	6.48%
Be 313.042†	648.8	0.00103	mg/L	0.000027	0.00103	mg/L	0.000027	2.64%
Ca 317.933†	628.1	0.04715	mg/L	0.002393	0.04715	mg/L	0.002393	5.08%
Cd 228.802†	85.8	0.00256	mg/L	0.000274	0.00256	mg/L	0.000274	10.71%
Co 228.616†	135.3	0.00415	mg/L	0.000240	0.00415	mg/L	0.000240	5.78%
Cr 267.716†	34.0	0.00582	mg/L	0.001949	0.00582	mg/L	0.001949	33.51%
Cu 324.752†	632.9	0.00263	mg/L	0.000313	0.00263	mg/L	0.000313	11.91%
Fe 273.955†	65.7	0.05386	mg/L	0.003753	0.05386	mg/L	0.003753	6.97%
K 766.490†	881.5	0.4711	mg/L	0.02205	0.4711	mg/L	0.02205	4.68%
Mg 279.077†	71.3	0.05109	mg/L	0.008252	0.05109	mg/L	0.008252	16.15%
Mn 257.610†	38.8	0.00115	mg/L	0.000224	0.00115	mg/L	0.000224	19.52%
Mo 202.031†	110.5	0.00582	mg/L	0.000215	0.00582	mg/L	0.000215	3.69%
Na 589.592†	5606.5	0.4689	mg/L	0.00388	0.4689	mg/L	0.00388	0.83%
Na 330.237†	22.6	0.8293	mg/L	0.26336	0.8293	mg/L	0.26336	31.76%
Ni 231.604†	36.8	0.00959	mg/L	0.000659	0.00959	mg/L	0.000659	6.87%
Pb 220.353†	147.0	0.01928	mg/L	0.000328	0.01928	mg/L	0.000328	1.70%
Sb 206.836†	169.2	0.05471	mg/L	0.000281	0.05471	mg/L	0.000281	0.51%
Se 196.026†	67.1	0.04819	mg/L	0.001541	0.04819	mg/L	0.001541	3.20%
Si 288.158†	125.6	0.06199	mg/L	0.003804	0.06199	mg/L	0.003804	6.14%
Sn 189.927†	38.6	0.01055	mg/L	0.000669	0.01055	mg/L	0.000669	6.33%
Sr 421.552†	937.8	0.00107	mg/L	0.000018	0.00107	mg/L	0.000018	1.69%
Ti 334.903†	103.3	0.00529	mg/L	0.000471	0.00529	mg/L	0.000471	8.90%
Tl 190.801†	110.2	0.04586	mg/L	0.001291	0.04586	mg/L	0.001291	2.81%
V 292.402†	432.0	0.00356	mg/L	0.000366	0.00356	mg/L	0.000366	10.28%
Zn 206.200†	35.1	0.00928	mg/L	0.000744	0.00928	mg/L	0.000744	8.02%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/15/2012 9:11:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
A11	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2511077.6	100.1	%	0.24				0.24%
ScR 361.383	322019.5	98.98	%	0.313				0.32%
Ag 328.068†	-202.2	-0.00121	mg/L	0.000154	-0.00121	mg/L	0.000154	12.73%
Al 308.215†	334757.5	198.2	mg/L	1.68	198.2	mg/L	1.68	0.85%
As 188.979†	37.5	0.01566	mg/L	0.000355	0.01566	mg/L	0.000355	2.27%
B 249.677†	-2.1	-0.00029	mg/L	0.002457	-0.00029	mg/L	0.002457	841.76%
Ba 233.527†	131.4	-0.00065	mg/L	0.000639	-0.00065	mg/L	0.000639	98.06%
Be 313.042†	71.4	0.00011	mg/L	0.000011	0.00011	mg/L	0.000011	9.54%
Ca 317.933†	1323676.3	99.37	mg/L	1.402	99.37	mg/L	1.402	1.41%
Cd 228.802†	63.3	0.00014	mg/L	0.000252	0.00014	mg/L	0.000252	175.22%
Co 228.616†	84.3	0.00006	mg/L	0.000209	0.00006	mg/L	0.000209	328.91%
Cr 267.716†	9.3	-0.00065	mg/L	0.000439	-0.00065	mg/L	0.000439	67.56%
Cu 324.752†	-1900.4	-0.00023	mg/L	0.000159	-0.00023	mg/L	0.000159	68.56%
Fe 273.955†	235500.5	193.1	mg/L	2.82	193.1	mg/L	2.82	1.46%
K 766.490†	-3.3	-0.00176	mg/L	0.023799	-0.00176	mg/L	0.023799	>999.9%
Mg 279.077†	144234.3	103.2	mg/L	1.94	103.2	mg/L	1.94	1.88%
Mn 257.610†	15.6	0.00041	mg/L	0.000233	0.00041	mg/L	0.000233	56.53%
Mo 202.031†	41.2	0.00110	mg/L	0.000396	0.00110	mg/L	0.000396	36.02%
Na 589.592†	126.2	0.01055	mg/L	0.002332	0.01055	mg/L	0.002332	22.10%
Na 330.237†	-5.1	-0.1888	mg/L	0.17451	-0.1888	mg/L	0.17451	92.41%
Ni 231.604†	0.3	0.00009	mg/L	0.001674	0.00009	mg/L	0.001674	>999.9%
Pb 220.353†	-280.9	0.00269	mg/L	0.000242	0.00269	mg/L	0.000242	9.01%
Sb 206.836†	21.4	0.00674	mg/L	0.001096	0.00674	mg/L	0.001096	16.26%
Se 196.026†	21.8	0.01567	mg/L	0.002626	0.01567	mg/L	0.002626	16.76%
Si 288.158†	-29.1	-0.00186	mg/L	0.004206	-0.00186	mg/L	0.004206	225.67%
Sn 189.927†	-76.7	-0.00861	mg/L	0.000603	-0.00861	mg/L	0.000603	7.00%
Sr 421.552†	3424.3	0.00390	mg/L Conf.	0.000041	0.00390	mg/L	0.000041	1.05%
Ti 334.903†	141.4	0.00251	mg/L	0.000569	0.00251	mg/L	0.000569	22.63%
Tl 190.801†	-58.4	-0.00371	mg/L	0.001047	-0.00371	mg/L	0.001047	28.25%
V 292.402†	1361.9	0.00442	mg/L	0.000092	0.00442	mg/L	0.000092	2.09%
Zn 206.200†	17.1	0.00452	mg/L	0.000355	0.00452	mg/L	0.000355	7.85%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/15/2012 9:15:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
A11	215.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2528705.3	100.8	%	0.68				0.67%
ScR 361.383	315820.9	97.07	%	1.540				1.59%
Ag 328.068†	161011.1	0.9671	mg/L	0.00141	0.9671	mg/L	0.00141	0.15%
Al 308.215†	337545.6	199.8	mg/L	2.76	199.8	mg/L	2.76	1.38%
As 188.979†	1724.2	0.9702	mg/L	0.00654	0.9702	mg/L	0.00654	0.67%
B 249.677†	-0.8	-0.00217	mg/L	0.000529	-0.00217	mg/L	0.000529	24.45%
Ba 233.527†	4562.3	1.043	mg/L	0.0144	1.043	mg/L	0.0144	1.38%
Be 313.042†	600467.0	0.9496	mg/L	0.01265	0.9496	mg/L	0.01265	1.33%
Ca 317.933†	1340770.7	100.7	mg/L	1.44	100.7	mg/L	1.44	1.43%
Cd 228.802†	30549.3	1.017	mg/L	0.0038	1.017	mg/L	0.0038	0.38%
Co 228.616†	32468.8	0.9959	mg/L	0.00634	0.9959	mg/L	0.00634	0.64%
Cr 267.716†	6049.7	1.035	mg/L	0.0134	1.035	mg/L	0.0134	1.29%
Cu 324.752†	245445.9	1.028	mg/L	0.0013	1.028	mg/L	0.0013	0.13%
Fe 273.955†	238238.8	195.4	mg/L	2.33	195.4	mg/L	2.33	1.19%
K 766.490†	-73.1	-0.03909	mg/L	0.005856	-0.03909	mg/L	0.005856	14.98%
Mg 279.077†	140087.6	100.2	mg/L	1.32	100.2	mg/L	1.32	1.32%
Mn 257.610†	33142.1	0.9779	mg/L	0.01224	0.9779	mg/L	0.01224	1.25%
Mo 202.031†	45.3	0.00124	mg/L	0.000058	0.00124	mg/L	0.000058	4.64%
Na 589.592†	316.9	0.02651	mg/L	0.001879	0.02651	mg/L	0.001879	7.09%
Na 330.237†	6.5	-0.07239	mg/L	0.118756	-0.07239	mg/L	0.118756	164.06%
Ni 231.604†	3658.1	0.9537	mg/L	0.01379	0.9537	mg/L	0.01379	1.45%
Pb 220.353†	6822.3	0.9343	mg/L	0.00771	0.9343	mg/L	0.00771	0.83%
Sb 206.836†	3098.1	0.9898	mg/L	0.00848	0.9898	mg/L	0.00848	0.86%
Se 196.026†	1333.9	0.9569	mg/L	0.00683	0.9569	mg/L	0.00683	0.71%
Si 288.158†	-33.0	-0.00045	mg/L	0.003204	-0.00045	mg/L	0.003204	707.87%
Sn 189.927†	-77.4	-0.00814	mg/L	0.000664	-0.00814	mg/L	0.000664	8.16%
Sr 421.552†	3392.4	0.00387	mg/L	0.000068	0.00387	mg/L	0.000068	1.75%
Ti 334.903†	144.0	0.00238	mg/L	0.000136	0.00238	mg/L	0.000136	5.70%
Tl 190.801†	2139.3	0.9023	mg/L	0.00577	0.9023	mg/L	0.00577	0.64%
V 292.402†	119844.4	0.9801	mg/L	0.00119	0.9801	mg/L	0.00119	0.12%
Zn 206.200†	3574.4	0.9444	mg/L	0.01280	0.9444	mg/L	0.01280	1.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/15/2012 9:20:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2555973.3	101.9	%	0.06				0.05%
ScR 361.383	324721.0	99.81	%	1.317				1.32%
Ag 328.068†	166240.7	0.9985	mg/L	0.00150	0.9985	mg/L	0.00150	0.15%
Al 308.215†	3532.6	2.057	mg/L	0.0287	2.057	mg/L	0.0287	1.40%
As 188.979†	3454.0	1.982	mg/L	0.0140	1.982	mg/L	0.0140	0.71%
B 249.677†	7158.0	0.9772	mg/L	0.01110	0.9772	mg/L	0.01110	1.14%
Ba 233.527†	4488.2	1.057	mg/L	0.0107	1.057	mg/L	0.0107	1.02%
Be 313.042†	602500.1	0.9528	mg/L	0.01590	0.9528	mg/L	0.01590	1.67%
Ca 317.933†	26642.0	2.000	mg/L	0.0313	2.000	mg/L	0.0313	1.57%
Cd 228.802†	31401.6	1.041	mg/L	0.0039	1.041	mg/L	0.0039	0.37%
Co 228.616†	33352.4	1.024	mg/L	0.0026	1.024	mg/L	0.0026	0.25%
Cr 267.716†	6106.5	1.046	mg/L	0.0081	1.046	mg/L	0.0081	0.77%
Cu 324.752†	243019.1	1.010	mg/L	0.0022	1.010	mg/L	0.0022	0.22%
Fe 273.955†	2564.2	2.096	mg/L	0.0253	2.096	mg/L	0.0253	1.21%
K 766.490†	37536.5	20.06	mg/L	0.266	20.06	mg/L	0.266	1.33%
Mg 279.077†	2895.7	2.081	mg/L	0.0118	2.081	mg/L	0.0118	0.57%
Mn 257.610†	33964.1	1.002	mg/L	0.0174	1.002	mg/L	0.0174	1.74%
Mo 202.031†	18765.2	0.9888	mg/L	0.00291	0.9888	mg/L	0.00291	0.29%
Na 589.592†	592702.3	49.57	mg/L	0.719	49.57	mg/L	0.719	1.45%
Na 330.237†	1426.0	52.26	mg/L	0.547	52.26	mg/L	0.547	1.05%
Ni 231.604†	3799.6	0.9907	mg/L	0.01028	0.9907	mg/L	0.01028	1.04%
Pb 220.353†	14526.1	1.904	mg/L	0.0070	1.904	mg/L	0.0070	0.37%
Sb 206.836†	6513.3	2.103	mg/L	0.0079	2.103	mg/L	0.0079	0.38%
Se 196.026†	2701.1	1.939	mg/L	0.0144	1.939	mg/L	0.0144	0.74%
Si 288.158†	4275.9	2.111	mg/L	0.0245	2.111	mg/L	0.0245	1.16%
Sn 189.927†	3693.6	1.008	mg/L	0.0076	1.008	mg/L	0.0076	0.75%
Sr 421.552†	851219.1	0.9703	mg/L	0.01489	0.9703	mg/L	0.01489	1.53%
Ti 334.903†	20141.7	1.033	mg/L	0.0158	1.033	mg/L	0.0158	1.53%
Tl 190.801†	4700.9	1.949	mg/L	0.0077	1.949	mg/L	0.0077	0.39%
V 292.402†	126563.4	1.042	mg/L	0.0013	1.042	mg/L	0.0013	0.13%
Zn 206.200†	3888.9	1.027	mg/L	0.0102	1.027	mg/L	0.0102	0.99%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/15/2012 9:25:41 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2548393.8	101.6	%	0.14				0.14%
ScR 361.383	329143.9	101.2	%	1.47				1.45%
Ag 328.068†	-52.2	-0.00031	mg/L	0.000211	-0.00031	mg/L	0.000211	67.23%
Al 308.215†	-2.7	-0.00160	mg/L	0.009622	-0.00160	mg/L	0.009622	601.76%
As 188.979†	2.0	0.00121	mg/L	0.000042	0.00121	mg/L	0.000042	3.47%
B 249.677†	18.3	0.00250	mg/L	0.000705	0.00250	mg/L	0.000705	28.24%
Ba 233.527†	2.0	0.00048	mg/L	0.000251	0.00048	mg/L	0.000251	52.49%
Be 313.042†	109.1	0.00017	mg/L	0.000037	0.00017	mg/L	0.000037	21.38%
Ca 317.933†	34.2	0.00257	mg/L	0.000453	0.00257	mg/L	0.000453	17.63%
Cd 228.802†	8.5	0.00028	mg/L	0.000052	0.00028	mg/L	0.000052	18.91%
Co 228.616†	10.6	0.00032	mg/L	0.000069	0.00032	mg/L	0.000069	21.42%
Cr 267.716†	1.3	0.00023	mg/L	0.001213	0.00023	mg/L	0.001213	531.93%
Cu 324.752†	74.1	0.00031	mg/L	0.000136	0.00031	mg/L	0.000136	44.16%
Fe 273.955†	9.8	0.00803	mg/L	0.002059	0.00803	mg/L	0.002059	25.62%
K 766.490†	18.6	0.00992	mg/L	0.010468	0.00992	mg/L	0.010468	105.53%
Mg 279.077†	7.4	0.00528	mg/L	0.002626	0.00528	mg/L	0.002626	49.69%
Mn 257.610†	1.8	0.00005	mg/L	0.000046	0.00005	mg/L	0.000046	86.42%
Mo 202.031†	19.9	0.00105	mg/L	0.000138	0.00105	mg/L	0.000138	13.18%
Na 589.592†	58.6	0.00490	mg/L	0.002046	0.00490	mg/L	0.002046	41.73%
Na 330.237†	1.7	0.06378	mg/L	0.199624	0.06378	mg/L	0.199624	313.01%
Ni 231.604†	0.6	0.00017	mg/L	0.001030	0.00017	mg/L	0.001030	602.39%
Pb 220.353†	-4.4	-0.00058	mg/L	0.000164	-0.00058	mg/L	0.000164	28.43%
Sb 206.836†	9.2	0.00296	mg/L	0.001942	0.00296	mg/L	0.001942	65.54%
Se 196.026†	1.4	0.00103	mg/L	0.001872	0.00103	mg/L	0.001872	181.72%
Si 288.158†	-0.2	-0.00009	mg/L	0.002231	-0.00009	mg/L	0.002231	>999.9%
Sn 189.927†	-0.3	-0.00007	mg/L	0.000777	-0.00007	mg/L	0.000777	>999.9%
Sr 421.552†	155.6	0.00018	mg/L	0.000020	0.00018	mg/L	0.000020	11.18%
Ti 334.903†	34.8	0.00178	mg/L	0.000824	0.00178	mg/L	0.000824	46.18%
Tl 190.801†	-2.0	-0.00083	mg/L	0.001808	-0.00083	mg/L	0.001808	218.97%
V 292.402†	16.8	0.00014	mg/L	0.000100	0.00014	mg/L	0.000100	72.30%
Zn 206.200†	-1.0	-0.00026	mg/L	0.000186	-0.00026	mg/L	0.000186	71.59%

Analysis Begun

Start Time: 11/15/2012 9:44:17 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VS40 MB1 SWC
Autosampler Location: 304
Date Collected: 11/15/2012 9:44:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS40 MB1 SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2607686.8	104.0	%	0.28				0.27%
ScR 361.383	329133.2	101.2	%	1.59				1.57%
Ag 328.068†	-28.5	-0.00017	mg/L	0.000096	-0.00034	mg/L	0.000193	56.31%
Al 308.215†	10.3	0.00611	mg/L	0.001620	0.01223	mg/L	0.003241	26.50%
As 188.979†	2.0	0.00118	mg/L	0.000340	0.00236	mg/L	0.000679	28.74%
B 249.677†	3.5	0.00047	mg/L	0.000325	0.00095	mg/L	0.000649	68.36%
Ba 233.527†	-0.2	-0.00006	mg/L	0.000577	-0.00011	mg/L	0.001155	>999.9%
Be 313.042†	12.5	0.00002	mg/L	0.000020	0.00004	mg/L	0.000040	100.09%
Ca 317.933†	151.3	0.01136	mg/L	0.000471	0.02272	mg/L	0.000942	4.15%
Cd 228.802†	-6.5	-0.00023	mg/L	0.000118	-0.00045	mg/L	0.000235	51.84%
Co 228.616†	5.8	0.00018	mg/L	0.000047	0.00035	mg/L	0.000094	26.59%
Cr 267.716†	5.7	0.00097	mg/L	0.000540	0.00194	mg/L	0.001080	55.76%
Cu 324.752†	103.8	0.00043	mg/L	0.000118	0.00086	mg/L	0.000236	27.36%
Fe 273.955†	4.6	0.00377	mg/L	0.001271	0.00754	mg/L	0.002541	33.68%
K 766.490†	-31.6	-0.01691	mg/L	0.011280	-0.03383	mg/L	0.022560	66.69%
Mg 279.077†	10.9	0.00783	mg/L	0.001982	0.01566	mg/L	0.003965	25.32%
Mn 257.610†	-3.1	-0.00009	mg/L	0.000112	-0.00018	mg/L	0.000224	121.29%
Mo 202.031†	-0.7	-0.00004	mg/L	0.000250	-0.00008	mg/L	0.000501	639.06%
Na 589.592†	29.1	0.00244	mg/L	0.001546	0.00488	mg/L	0.003091	63.41%
Na 330.237†	4.7	0.1729	mg/L	0.26321	0.3458	mg/L	0.52643	152.23%
Ni 231.604†	-4.5	-0.00118	mg/L	0.000578	-0.00236	mg/L	0.001156	48.96%
Pb 220.353†	-5.3	-0.00069	mg/L	0.001232	-0.00138	mg/L	0.002463	178.96%
Sb 206.836†	2.7	0.00087	mg/L	0.001295	0.00175	mg/L	0.002590	148.09%
Se 196.026†	2.1	0.00151	mg/L	0.004081	0.00301	mg/L	0.008161	270.77%
Si 288.158†	-1.2	-0.00057	mg/L	0.002285	-0.00114	mg/L	0.004570	399.97%
Sn 189.927†	0.3	0.00007	mg/L	0.000848	0.00015	mg/L	0.001695	>999.9%
Sr 421.552†	57.7	0.00007	mg/L	0.000034	0.00013	mg/L	0.000067	50.98%
Ti 334.903†	17.3	0.00089	mg/L	0.000660	0.00177	mg/L	0.001321	74.43%
Tl 190.801†	0.3	0.00014	mg/L	0.000907	0.00028	mg/L	0.001815	645.24%
V 292.402†	-12.2	-0.00010	mg/L	0.000080	-0.00019	mg/L	0.000159	82.92%
Zn 206.200†	7.3	0.00192	mg/L	0.000210	0.00384	mg/L	0.000420	10.93%

Sequence No.: 2
Sample ID: VS40 B SWC

Autosampler Location: 305
Date Collected: 11/15/2012 9:48:35 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 B SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2517776.3	100.4	%	0.54				0.54%
ScR 361.383	323689.1	99.49	%	0.494				0.50%
Ag 328.068†	-192.1	-0.00110	mg/L	0.000225	-0.00552	mg/L	0.001126	20.39%
Al 308.215†	139074.1	82.34	mg/L	1.178	411.7	mg/L	5.89	1.43%
As 188.979†	20.5	0.05369	mg/L	0.004248	0.2685	mg/L	0.02124	7.91%
B 249.677†	160.0	0.02176	mg/L	0.000714	0.1088	mg/L	0.00357	3.28%
Ba 233.527†	4384.5	1.020	mg/L	0.0184	5.099	mg/L	0.0918	1.80%
Be 313.042†	799.0	0.00120	mg/L	0.000013	0.00601	mg/L	0.000065	1.07%
Ca 317.933†	5470766.6	410.7	mg/L	7.24	2054	mg/L	36.19	1.76%
Cd 228.802†	69.1	0.00152	mg/L	0.000131	0.00762	mg/L	0.000655	8.60%
Co 228.616†	1736.5	0.04779	mg/L	0.000751	0.2390	mg/L	0.00375	1.57%
Cr 267.716†	706.5	0.1185	mg/L	0.00225	0.5925	mg/L	0.01124	1.90%
Cu 324.752†	130985.9	0.5474	mg/L	0.00900	2.737	mg/L	0.0450	1.64%
Fe 273.955†	99442.3	81.55	mg/L	1.048	407.8	mg/L	5.24	1.29%
K 766.490†	7668.5	4.098	mg/L	0.0342	20.49	mg/L	0.171	0.84%
Mg 279.077†	28201.6	20.16	mg/L	0.366	100.8	mg/L	1.83	1.81%
Mn 257.610†	77110.0	2.276	mg/L	0.0305	11.38	mg/L	0.152	1.34%
Mo 202.031†	213.6	0.00681	mg/L	0.000326	0.03405	mg/L	0.001631	4.79%
Na 589.592†	29290.5	2.450	mg/L	0.0309	12.25	mg/L	0.154	1.26%
Na 330.237†	69.6	2.764	mg/L	0.1746	13.82	mg/L	0.873	6.32%
Ni 231.604†	303.2	0.07907	mg/L	0.001020	0.3953	mg/L	0.00510	1.29%
Pb 220.353†	79284.0	10.40	mg/L	0.188	52.02	mg/L	0.939	1.81%
Sb 206.836†	126.8	0.04113	mg/L	0.000978	0.2056	mg/L	0.00489	2.38%
Se 196.026†	-11.9	-0.00867	mg/L	0.007767	-0.04335	mg/L	0.038833	89.58%
Si 288.158†	1194.3	0.5920	mg/L	0.01023	2.960	mg/L	0.0511	1.73%
Sn 189.927†	86.0	0.07490	mg/L	0.000413	0.3745	mg/L	0.00207	0.55%
Sr 421.552†	1225317.8	1.397	mg/L	0.0170	6.984	mg/L	0.0849	1.21%
Ti 334.903†	45002.5	2.290	mg/L	0.0334	11.45	mg/L	0.167	1.46%
Tl 190.801†	0.1	0.00783	mg/L	0.002153	0.03916	mg/L	0.010767	27.50%
V 292.402†	20708.6	0.1665	mg/L	0.00266	0.8323	mg/L	0.01331	1.60%
Zn 206.200†	3648.4	0.9645	mg/L	0.02148	4.822	mg/L	0.1074	2.23%

Sequence No.: 3
Sample ID: VS40 C SWC

Autosampler Location: 306
Date Collected: 11/15/2012 9:53:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 C SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2532051.1	101.0	%	0.49				0.49%
ScR 361.383	330251.5	101.5	%	0.22				0.22%
Ag 328.068†	-209.7	-0.00120	mg/L	0.000303	-0.00601	mg/L	0.001515	25.20%
Al 308.215†	136138.6	80.60	mg/L	0.159	403.0	mg/L	0.80	0.20%
As 188.979†	0.1	0.05707	mg/L	0.001144	0.2854	mg/L	0.00572	2.01%
B 249.677†	137.5	0.01869	mg/L	0.001013	0.09343	mg/L	0.005067	5.42%
Ba 233.527†	4052.7	0.9409	mg/L	0.00678	4.704	mg/L	0.0339	0.72%
Be 313.042†	652.5	0.00096	mg/L	0.000007	0.00480	mg/L	0.000037	0.78%
Ca 317.933†	4933212.7	370.4	mg/L	1.79	1852	mg/L	8.95	0.48%
Cd 228.802†	56.8	0.00115	mg/L	0.000097	0.00576	mg/L	0.000483	8.40%
Co 228.616†	1737.6	0.04692	mg/L	0.000417	0.2346	mg/L	0.00208	0.89%
Cr 267.716†	751.7	0.1266	mg/L	0.00101	0.6329	mg/L	0.00505	0.80%
Cu 324.752†	105301.6	0.4407	mg/L	0.00725	2.204	mg/L	0.0363	1.65%
Fe 273.955†	104728.8	85.89	mg/L	0.421	429.4	mg/L	2.10	0.49%
K 766.490†	10296.8	5.503	mg/L	0.0151	27.52	mg/L	0.076	0.27%
Mg 279.077†	32317.8	23.10	mg/L	0.083	115.5	mg/L	0.41	0.36%
Mn 257.610†	64903.0	1.914	mg/L	0.0082	9.571	mg/L	0.0412	0.43%
Mo 202.031†	198.4	0.00645	mg/L	0.000518	0.03223	mg/L	0.002592	8.04%
Na 589.592†	27081.3	2.265	mg/L	0.0057	11.33	mg/L	0.028	0.25%
Na 330.237†	67.9	2.838	mg/L	0.1391	14.19	mg/L	0.696	4.90%
Ni 231.604†	333.4	0.08691	mg/L	0.000880	0.4346	mg/L	0.00440	1.01%
Pb 220.353†	15569.4	2.055	mg/L	0.0281	10.28	mg/L	0.141	1.37%
Sb 206.836†	28.1	0.00921	mg/L	0.000780	0.04607	mg/L	0.003901	8.47%
Se 196.026†	-14.4	-0.01046	mg/L	0.001100	-0.05229	mg/L	0.005502	10.52%
Si 288.158†	1213.0	0.6018	mg/L	0.00382	3.009	mg/L	0.0191	0.64%
Sn 189.927†	11.2	0.04933	mg/L	0.001197	0.2466	mg/L	0.00598	2.43%
Sr 421.552†	1039989.3	1.186	mg/L	0.0047	5.928	mg/L	0.0234	0.40%
Ti 334.903†	53602.3	2.734	mg/L	0.0087	13.67	mg/L	0.043	0.32%
Tl 190.801†	0.3	0.00831	mg/L	0.001651	0.04153	mg/L	0.008254	19.87%
V 292.402†	23949.4	0.1926	mg/L	0.00287	0.9630	mg/L	0.01436	1.49%
Zn 206.200†	3221.5	0.8512	mg/L	0.00466	4.256	mg/L	0.0233	0.55%

Sequence No.: 4
Sample ID: VS40 D SWC

Autosampler Location: 307
Date Collected: 11/15/2012 9:57:26 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2508703.2	100.0	%	0.39				0.39%
ScR 361.383	329166.2	101.2	%	0.23				0.23%
Ag 328.068†	-268.4	-0.00155	mg/L	0.000275	-0.00775	mg/L	0.001374	17.72%
Al 308.215†	150839.0	89.30	mg/L	0.297	446.5	mg/L	1.49	0.33%
As 188.979†	-13.9	0.04708	mg/L	0.002153	0.2354	mg/L	0.01077	4.57%
B 249.677†	148.1	0.02012	mg/L	0.000487	0.1006	mg/L	0.00244	2.42%
Ba 233.527†	3703.6	0.8556	mg/L	0.00587	4.278	mg/L	0.0294	0.69%
Be 313.042†	836.5	0.00125	mg/L	0.000011	0.00625	mg/L	0.000057	0.91%
Ca 317.933†	4629760.9	347.6	mg/L	4.69	1738	mg/L	23.46	1.35%
Cd 228.802†	66.4	0.00136	mg/L	0.000118	0.00681	mg/L	0.000591	8.68%
Co 228.616†	1999.3	0.05497	mg/L	0.000254	0.2748	mg/L	0.00127	0.46%
Cr 267.716†	721.8	0.1220	mg/L	0.00128	0.6102	mg/L	0.00640	1.05%
Cu 324.752†	101242.1	0.4247	mg/L	0.00273	2.123	mg/L	0.0136	0.64%
Fe 273.955†	127205.6	104.3	mg/L	0.27	521.6	mg/L	1.35	0.26%
K 766.490†	9033.0	4.828	mg/L	0.0231	24.14	mg/L	0.115	0.48%
Mg 279.077†	37132.5	26.54	mg/L	0.054	132.7	mg/L	0.27	0.20%
Mn 257.610†	78905.4	2.327	mg/L	0.0059	11.64	mg/L	0.030	0.25%
Mo 202.031†	194.7	0.00650	mg/L	0.000377	0.03248	mg/L	0.001884	5.80%
Na 589.592†	29763.6	2.489	mg/L	0.0162	12.45	mg/L	0.081	0.65%
Na 330.237†	73.0	2.989	mg/L	0.1429	14.94	mg/L	0.715	4.78%
Ni 231.604†	382.8	0.09980	mg/L	0.000588	0.4990	mg/L	0.00294	0.59%
Pb 220.353†	7219.5	0.9626	mg/L	0.00158	4.813	mg/L	0.0079	0.16%
Sb 206.836†	26.7	0.00887	mg/L	0.001975	0.04434	mg/L	0.009873	22.26%
Se 196.026†	-11.0	-0.00803	mg/L	0.005942	-0.04013	mg/L	0.029708	74.03%
Si 288.158†	1050.8	0.5221	mg/L	0.00148	2.610	mg/L	0.0074	0.28%
Sn 189.927†	8.8	0.04579	mg/L	0.000982	0.2290	mg/L	0.00491	2.14%
Sr 421.552†	960540.4	1.095	mg/L	0.0096	5.475	mg/L	0.0479	0.87%
Ti 334.903†	51277.0	2.616	mg/L	0.0046	13.08	mg/L	0.023	0.18%
Tl 190.801†	-11.1	0.00544	mg/L	0.001736	0.02718	mg/L	0.008679	31.93%
V 292.402†	25829.2	0.2075	mg/L	0.00085	1.037	mg/L	0.0043	0.41%
Zn 206.200†	3358.9	0.8875	mg/L	0.00424	4.437	mg/L	0.0212	0.48%

Sequence No.: 5
Sample ID: VS40 E SWC

Autosampler Location: 308
Date Collected: 11/15/2012 10:01:44 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 E SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2512166.3	100.2	%	0.67				0.67%
ScR 361.383	318108.4	97.77	%	0.878				0.90%
Ag 328.068†	-315.3	-0.00184	mg/L	0.000104	-0.00922	mg/L	0.000519	5.63%
Al 308.215†	165547.1	98.01	mg/L	0.529	490.1	mg/L	2.64	0.54%
As 188.979†	4.9	0.04929	mg/L	0.001561	0.2464	mg/L	0.00780	3.17%
B 249.677†	181.7	0.02470	mg/L	0.000324	0.1235	mg/L	0.00162	1.31%
Ba 233.527†	4940.0	1.149	mg/L	0.0122	5.746	mg/L	0.0611	1.06%
Be 313.042†	899.5	0.00136	mg/L	0.000029	0.00679	mg/L	0.000144	2.13%
Ca 317.933†	5937492.1	445.7	mg/L	3.86	2229	mg/L	19.32	0.87%
Cd 228.802†	61.5	0.00124	mg/L	0.000121	0.00622	mg/L	0.000607	9.75%
Co 228.616†	2255.5	0.06320	mg/L	0.000421	0.3160	mg/L	0.00211	0.67%
Cr 267.716†	706.2	0.1183	mg/L	0.00047	0.5915	mg/L	0.00236	0.40%
Cu 324.752†	135815.4	0.5678	mg/L	0.00242	2.839	mg/L	0.0121	0.43%
Fe 273.955†	109995.9	90.21	mg/L	0.764	451.0	mg/L	3.82	0.85%
K 766.490†	8097.4	4.328	mg/L	0.0090	21.64	mg/L	0.045	0.21%
Mg 279.077†	27474.8	19.63	mg/L	0.103	98.17	mg/L	0.516	0.53%
Mn 257.610†	156703.9	4.623	mg/L	0.0359	23.11	mg/L	0.179	0.78%
Mo 202.031†	214.0	0.00645	mg/L	0.000059	0.03226	mg/L	0.000295	0.92%
Na 589.592†	28951.4	2.421	mg/L	0.0115	12.11	mg/L	0.057	0.47%
Na 330.237†	63.9	2.542	mg/L	0.0813	12.71	mg/L	0.407	3.20%
Ni 231.604†	314.5	0.08198	mg/L	0.001960	0.4099	mg/L	0.00980	2.39%
Pb 220.353†	42222.4	5.551	mg/L	0.0269	27.76	mg/L	0.135	0.49%
Sb 206.836†	40.5	0.01322	mg/L	0.002451	0.06611	mg/L	0.012255	18.54%
Se 196.026†	-17.0	-0.01230	mg/L	0.004929	-0.06152	mg/L	0.024644	40.06%
Si 288.158†	1153.2	0.5717	mg/L	0.00620	2.859	mg/L	0.0310	1.09%
Sn 189.927†	36.6	0.06566	mg/L	0.000986	0.3283	mg/L	0.00493	1.50%
Sr 421.552†	1207531.2	1.377	mg/L	0.0086	6.883	mg/L	0.0432	0.63%
Ti 334.903†	49404.2	2.515	mg/L	0.0173	12.57	mg/L	0.087	0.69%
Tl 190.801†	-2.2	0.00775	mg/L	0.003626	0.03875	mg/L	0.018131	46.79%
V 292.402†	20637.3	0.1658	mg/L	0.00099	0.8290	mg/L	0.00496	0.60%
Zn 206.200†	4365.1	1.154	mg/L	0.0116	5.768	mg/L	0.0582	1.01%

Sequence No.: 6
Sample ID: VS40 F SWC

Autosampler Location: 309
Date Collected: 11/15/2012 10:06:18 AM
Data Type: Original

Dilution: 5.000000X Del

Nebulizer Parameters: VS40 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2492617.6	99.40	%	0.335				0.34%
ScR 361.383	321477.9	98.81	%	0.350				0.35%
Ag 328.068†	-337.8	-0.00197	mg/L	0.000210	-0.00987	mg/L	0.001050	10.63%
Al 308.215†	154137.0	91.26	mg/L	0.815	456.3	mg/L	4.08	0.89%
As 188.979†	16.3	0.05300	mg/L	0.002213	0.2650	mg/L	0.01106	4.18%
B 249.677†	196.7	0.02676	mg/L	0.001413	0.1338	mg/L	0.00706	5.28%
Ba 233.527†	5960.3	1.389	mg/L	0.0047	6.944	mg/L	0.0236	0.34%
Be 313.042†	960.0	0.00145	mg/L	0.000006	0.00725	mg/L	0.000030	0.41%
Ca 317.933†	6797032.4	510.3	mg/L	1.58	2551	mg/L	7.89	0.31%
Cd 228.802†	64.4	0.00126	mg/L	0.000082	0.00630	mg/L	0.000408	6.47%
Co 228.616†	1973.7	0.05437	mg/L	0.000153	0.2719	mg/L	0.00077	0.28%
Cr 267.716†	789.1	0.1318	mg/L	0.00146	0.6592	mg/L	0.00730	1.11%
Cu 324.752†	130139.0	0.5444	mg/L	0.00261	2.722	mg/L	0.0131	0.48%
Fe 273.955†	116227.7	95.32	mg/L	1.121	476.6	mg/L	5.60	1.18%
K 766.490†	12407.5	6.631	mg/L	0.0421	33.16	mg/L	0.211	0.64%
Mg 279.077†	35498.4	25.38	mg/L	0.085	126.9	mg/L	0.42	0.33%
Mn 257.610†	73796.9	2.177	mg/L	0.0243	10.88	mg/L	0.121	1.11%
Mo 202.031†	230.6	0.00663	mg/L	0.000168	0.03315	mg/L	0.000838	2.53%
Na 589.592†	39709.8	3.321	mg/L	0.0327	16.61	mg/L	0.164	0.98%
Na 330.237†	93.2	3.613	mg/L	0.1159	18.06	mg/L	0.579	3.21%
Ni 231.604†	355.9	0.09278	mg/L	0.000907	0.4639	mg/L	0.00453	0.98%
Pb 220.353†	39240.5	5.159	mg/L	0.0087	25.79	mg/L	0.044	0.17%
Sb 206.836†	31.9	0.01034	mg/L	0.001185	0.05168	mg/L	0.005926	11.47%
Se 196.026†	-16.3	-0.01182	mg/L	0.007532	-0.05909	mg/L	0.037660	63.73%
Si 288.158†	1021.1	0.5072	mg/L	0.00589	2.536	mg/L	0.0295	1.16%
Sn 189.927†	44.4	0.07575	mg/L	0.001506	0.3788	mg/L	0.00753	1.99%
Sr 421.552†	1430464.9	1.631	mg/L	0.0162	8.153	mg/L	0.0808	0.99%
Ti 334.903†	50121.0	2.548	mg/L	0.0245	12.74	mg/L	0.122	0.96%
Tl 190.801†	-6.5	0.00647	mg/L	0.002678	0.03234	mg/L	0.013389	41.40%
V 292.402†	22787.0	0.1829	mg/L	0.00065	0.9146	mg/L	0.00326	0.36%
Zn 206.200†	4521.4	1.195	mg/L	0.0052	5.974	mg/L	0.0258	0.43%

Sequence No.: 7
Sample ID: VS40 ADUP SWC

Autosampler Location: 310
Date Collected: 11/15/2012 10:10:38 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2524256.0	100.7	%	0.25				0.25%
ScR 361.383	329244.4	101.2	%	0.86				0.85%
Ag 328.068†	-244.0	-0.00140	mg/L	0.000198	-0.00700	mg/L	0.000991	14.16%
Al 308.215†	153901.5	91.12	mg/L	0.421	455.6	mg/L	2.10	0.46%
As 188.979†	-16.0	0.05346	mg/L	0.002642	0.2673	mg/L	0.01321	4.94%
B 249.677†	123.7	0.01678	mg/L	0.000752	0.08388	mg/L	0.003758	4.48%
Ba 233.527†	3648.7	0.8411	mg/L	0.00761	4.205	mg/L	0.0380	0.90%
Be 313.042†	872.2	0.00130	mg/L	0.000027	0.00650	mg/L	0.000136	2.10%
Ca 317.933†	4119950.9	309.3	mg/L	3.35	1547	mg/L	16.74	1.08%
Cd 228.802†	69.0	0.00137	mg/L	0.000173	0.00686	mg/L	0.000864	12.60%
Co 228.616†	2150.9	0.05915	mg/L	0.000445	0.2957	mg/L	0.00222	0.75%
Cr 267.716†	769.0	0.1305	mg/L	0.00086	0.6524	mg/L	0.00432	0.66%
Cu 324.752†	106520.6	0.4470	mg/L	0.00275	2.235	mg/L	0.0137	0.61%
Fe 273.955†	138733.4	113.8	mg/L	0.60	568.9	mg/L	3.01	0.53%
K 766.490†	7943.2	4.245	mg/L	0.0122	21.23	mg/L	0.061	0.29%
Mg 279.077†	43113.9	30.82	mg/L	0.203	154.1	mg/L	1.02	0.66%
Mn 257.610†	81908.5	2.416	mg/L	0.0115	12.08	mg/L	0.057	0.47%
Mo 202.031†	181.3	0.00620	mg/L	0.000311	0.03102	mg/L	0.001556	5.01%
Na 589.592†	26070.1	2.180	mg/L	0.0114	10.90	mg/L	0.057	0.52%
Na 330.237†	62.0	2.661	mg/L	0.0457	13.30	mg/L	0.229	1.72%
Ni 231.604†	409.8	0.1068	mg/L	0.00069	0.5341	mg/L	0.00345	0.65%
Pb 220.353†	14307.3	1.891	mg/L	0.0067	9.457	mg/L	0.0337	0.36%
Sb 206.836†	29.9	0.00986	mg/L	0.001110	0.04930	mg/L	0.005548	11.26%
Se 196.026†	-14.0	-0.01023	mg/L	0.005289	-0.05113	mg/L	0.026445	51.72%
Si 288.158†	1530.4	0.7594	mg/L	0.00949	3.797	mg/L	0.0475	1.25%
Sn 189.927†	-12.5	0.03532	mg/L	0.000920	0.1766	mg/L	0.00460	2.61%
Sr 421.552†	932428.1	1.063	mg/L	0.0105	5.315	mg/L	0.0525	0.99%
Ti 334.903†	54922.5	2.804	mg/L	0.0128	14.02	mg/L	0.064	0.46%
Tl 190.801†	-6.8	0.00815	mg/L	0.000911	0.04073	mg/L	0.004556	11.18%
V 292.402†	27673.4	0.2222	mg/L	0.00111	1.111	mg/L	0.0055	0.50%
Zn 206.200†	2943.4	0.7778	mg/L	0.00826	3.889	mg/L	0.0413	1.06%

Sequence No.: 8
Sample ID: VS40 A SWC

Autosampler Location: 311
Date Collected: 11/15/2012 10:14:56 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 A SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2531572.4	100.9	%	0.35				0.35%
ScR 361.383	332432.6	102.2	%	0.16				0.16%
Ag 328.068†	-235.0	-0.00135	mg/L	0.000113	-0.00673	mg/L	0.000563	8.36%
Al 308.215†	159696.8	94.55	mg/L	0.330	472.7	mg/L	1.65	0.35%
As 188.979†	-19.4	0.05556	mg/L	0.002779	0.2778	mg/L	0.01390	5.00%
B 249.677†	145.8	0.01979	mg/L	0.000749	0.09896	mg/L	0.003746	3.78%
Ba 233.527†	3791.7	0.8750	mg/L	0.00151	4.375	mg/L	0.0075	0.17%
Be 313.042†	886.3	0.00132	mg/L	0.000032	0.00660	mg/L	0.000158	2.40%
Ca 317.933†	4217773.5	316.6	mg/L	0.41	1583	mg/L	2.03	0.13%
Cd 228.802†	64.0	0.00124	mg/L	0.000079	0.00618	mg/L	0.000396	6.41%
Co 228.616†	2141.7	0.05858	mg/L	0.000323	0.2929	mg/L	0.00162	0.55%
Cr 267.716†	852.4	0.1447	mg/L	0.00052	0.7234	mg/L	0.00259	0.36%
Cu 324.752†	111068.6	0.4658	mg/L	0.00207	2.329	mg/L	0.0103	0.44%
Fe 273.955†	136930.4	112.3	mg/L	0.42	561.5	mg/L	2.09	0.37%
K 766.490†	9898.0	5.290	mg/L	0.0116	26.45	mg/L	0.058	0.22%
Mg 279.077†	42436.7	30.34	mg/L	0.086	151.7	mg/L	0.43	0.28%
Mn 257.610†	83381.5	2.460	mg/L	0.0078	12.30	mg/L	0.039	0.32%
Mo 202.031†	177.3	0.00591	mg/L	0.000069	0.02957	mg/L	0.000346	1.17%
Na 589.592†	29809.8	2.493	mg/L	0.0034	12.47	mg/L	0.017	0.14%
Na 330.237†	68.1	2.918	mg/L	0.0789	14.59	mg/L	0.395	2.71%
Ni 231.604†	420.9	0.1097	mg/L	0.00107	0.5486	mg/L	0.00533	0.97%
Pb 220.353†	14588.5	1.929	mg/L	0.0077	9.645	mg/L	0.0383	0.40%
Sb 206.836†	32.1	0.01041	mg/L	0.000489	0.05205	mg/L	0.002445	4.70%
Se 196.026†	-6.5	-0.00480	mg/L	0.002713	-0.02398	mg/L	0.013563	56.55%
Si 288.158†	1440.1	0.7148	mg/L	0.00058	3.574	mg/L	0.0029	0.08%
Sn 189.927†	-13.2	0.03607	mg/L	0.000638	0.1804	mg/L	0.00319	1.77%
Sr 421.552†	951091.8	1.084	mg/L	0.0036	5.421	mg/L	0.0181	0.33%
Ti 334.903†	57957.6	2.960	mg/L	0.0114	14.80	mg/L	0.057	0.39%
Tl 190.801†	-9.2	0.00699	mg/L	0.000897	0.03497	mg/L	0.004484	12.82%
V 292.402†	27504.7	0.2208	mg/L	0.00101	1.104	mg/L	0.0051	0.46%
Zn 206.200†	2997.3	0.7920	mg/L	0.00217	3.960	mg/L	0.0109	0.27%

Sequence No.: 9
Sample ID: VS40 ASPK SWC

Autosampler Location: 312
Date Collected: 11/15/2012 10:19:14 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2578618.3	102.8	%	0.54				0.52%
ScR 361.383	333886.4	102.6	%	0.14				0.13%
Ag 328.068†	32313.8	0.1941	mg/L	0.00027	0.9707	mg/L	0.00137	0.14%
Al 308.215†	152951.4	90.55	mg/L	0.202	452.8	mg/L	1.01	0.22%
As 188.979†	1385.3	0.8391	mg/L	0.00485	4.196	mg/L	0.0243	0.58%
B 249.677†	129.0	0.01708	mg/L	0.000511	0.08541	mg/L	0.002553	2.99%
Ba 233.527†	7437.9	1.734	mg/L	0.0082	8.668	mg/L	0.0410	0.47%
Be 313.042†	123601.8	0.1954	mg/L	0.00084	0.9769	mg/L	0.00420	0.43%
Ca 317.933†	4287066.7	321.8	mg/L	0.68	1609	mg/L	3.40	0.21%
Cd 228.802†	6725.5	0.2195	mg/L	0.00113	1.097	mg/L	0.0057	0.52%
Co 228.616†	8790.5	0.2637	mg/L	0.00138	1.319	mg/L	0.0069	0.52%
Cr 267.716†	1939.2	0.3308	mg/L	0.00319	1.654	mg/L	0.0159	0.96%
Cu 324.752†	155987.1	0.6528	mg/L	0.00060	3.264	mg/L	0.0030	0.09%
Fe 273.955†	141801.0	116.3	mg/L	0.48	581.4	mg/L	2.41	0.41%
K 766.490†	15474.0	8.270	mg/L	0.0669	41.35	mg/L	0.335	0.81%
Mg 279.077†	44566.9	31.86	mg/L	0.065	159.3	mg/L	0.32	0.20%
Mn 257.610†	102248.7	3.017	mg/L	0.0100	15.08	mg/L	0.050	0.33%
Mo 202.031†	177.1	0.00584	mg/L	0.000218	0.02919	mg/L	0.001090	3.74%
Na 589.592†	75033.7	6.276	mg/L	0.0312	31.38	mg/L	0.156	0.50%
Na 330.237†	180.5	6.883	mg/L	0.2142	34.42	mg/L	1.071	3.11%
Ni 231.604†	1145.8	0.2984	mg/L	0.00210	1.492	mg/L	0.0105	0.70%
Pb 220.353†	30474.1	4.009	mg/L	0.0197	20.05	mg/L	0.099	0.49%
Sb 206.836†	55.2	0.01577	mg/L	0.001303	0.07884	mg/L	0.006516	8.27%
Se 196.026†	1079.8	0.7751	mg/L	0.00485	3.876	mg/L	0.0243	0.63%
Si 288.158†	1371.0	0.6817	mg/L	0.00221	3.408	mg/L	0.0111	0.32%
Sn 189.927†	-3.9	0.03925	mg/L	0.001298	0.1963	mg/L	0.00649	3.31%
Sr 421.552†	1124898.8	1.282	mg/L	0.0056	6.412	mg/L	0.0278	0.43%
Ti 334.903†	50025.5	2.552	mg/L	0.0069	12.76	mg/L	0.035	0.27%
Tl 190.801†	1771.8	0.7472	mg/L	0.00237	3.736	mg/L	0.0119	0.32%
V 292.402†	48862.1	0.3969	mg/L	0.00098	1.984	mg/L	0.0049	0.25%
Zn 206.200†	3795.3	1.003	mg/L	0.0096	5.015	mg/L	0.0479	0.95%

Sequence No.: 10
Sample ID: VS40 MB1SPK SWC

Autosampler Location: 313
Date Collected: 11/15/2012 10:23:17 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS40 MB1SPK SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS40 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631417.7	104.9	%	0.10				0.09%
ScR 361.383	334041.5	102.7	%	1.89				1.84%
Ag 328.068†	83819.1	0.5035	mg/L	0.00117	1.007	mg/L	0.0023	0.23%
Al 308.215†	3468.1	2.046	mg/L	0.0404	4.092	mg/L	0.0809	1.98%
As 188.979†	3407.5	1.929	mg/L	0.0105	3.858	mg/L	0.0211	0.55%
B 249.677†	7.5	-0.00002	mg/L	0.000079	-0.00005	mg/L	0.000158	341.68%
Ba 233.527†	8909.4	2.099	mg/L	0.0470	4.198	mg/L	0.0940	2.24%
Be 313.042†	301550.7	0.4769	mg/L	0.01143	0.9537	mg/L	0.02285	2.40%
Ca 317.933†	133278.2	10.01	mg/L	0.195	20.01	mg/L	0.389	1.94%
Cd 228.802†	15854.6	0.5192	mg/L	0.00156	1.038	mg/L	0.0031	0.30%
Co 228.616†	16627.7	0.5112	mg/L	0.00044	1.022	mg/L	0.0009	0.09%
Cr 267.716†	3037.5	0.5195	mg/L	0.01116	1.039	mg/L	0.0223	2.15%
Cu 324.752†	120631.5	0.5015	mg/L	0.00085	1.003	mg/L	0.0017	0.17%
Fe 273.955†	2538.7	2.078	mg/L	0.0426	4.157	mg/L	0.0851	2.05%
K 766.490†	18339.2	9.801	mg/L	0.2505	19.60	mg/L	0.501	2.56%
Mg 279.077†	14403.7	10.32	mg/L	0.218	20.64	mg/L	0.436	2.11%
Mn 257.610†	17266.0	0.5097	mg/L	0.01071	1.019	mg/L	0.0214	2.10%
Mo 202.031†	24.8	0.00117	mg/L	0.000120	0.00234	mg/L	0.000239	10.21%
Na 589.592†	114028.7	9.537	mg/L	0.2349	19.07	mg/L	0.470	2.46%
Na 330.237†	283.3	10.24	mg/L	0.226	20.48	mg/L	0.453	2.21%
Ni 231.604†	1889.1	0.4916	mg/L	0.01110	0.9832	mg/L	0.02220	2.26%
Pb 220.353†	14338.1	1.879	mg/L	0.0037	3.759	mg/L	0.0075	0.20%
Sb 206.836†	13.9	-0.00099	mg/L	0.000451	-0.00198	mg/L	0.000901	45.43%
Se 196.026†	2664.2	1.913	mg/L	0.0139	3.826	mg/L	0.0278	0.73%
Si 288.158†	-10.7	-0.00211	mg/L	0.000971	-0.00422	mg/L	0.001943	46.03%
Sn 189.927†	-18.2	-0.00366	mg/L	0.001234	-0.00733	mg/L	0.002467	33.67%
Sr 421.552†	424655.8	0.4841	mg/L	0.01182	0.9682	mg/L	0.02363	2.44%
Ti 334.903†	57.0	0.00235	mg/L	0.000372	0.00469	mg/L	0.000743	15.84%
Tl 190.801†	4568.1	1.897	mg/L	0.0115	3.795	mg/L	0.0230	0.61%
V 292.402†	62459.5	0.5142	mg/L	0.00149	1.028	mg/L	0.0030	0.29%
Zn 206.200†	1867.3	0.4934	mg/L	0.00958	0.9869	mg/L	0.01915	1.94%

Sequence No.: 11
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 11/15/2012 10:27:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2565536.0	102.3	%	0.28				0.28%
ScR 361.383	325427.9	100.0	%	0.92				0.92%
Ag 328.068†	165698.7	0.9953	mg/L	0.00413	0.9953	mg/L	0.00413	0.42%
Al 308.215†	3491.8	2.033	mg/L	0.0223	2.033	mg/L	0.0223	1.10%
As 188.979†	3452.0	1.980	mg/L	0.0083	1.980	mg/L	0.0083	0.42%
B 249.677†	7159.1	0.9773	mg/L	0.01408	0.9773	mg/L	0.01408	1.44%
Ba 233.527†	4481.2	1.055	mg/L	0.0158	1.055	mg/L	0.0158	1.50%
Be 313.042†	595968.1	0.9424	mg/L	0.01561	0.9424	mg/L	0.01561	1.66%
Ca 317.933†	26637.7	2.000	mg/L	0.0321	2.000	mg/L	0.0321	1.60%
Cd 228.802†	31240.6	1.035	mg/L	0.0061	1.035	mg/L	0.0061	0.59%
Co 228.616†	33307.4	1.022	mg/L	0.0054	1.022	mg/L	0.0054	0.53%
Cr 267.716†	6093.6	1.044	mg/L	0.0143	1.044	mg/L	0.0143	1.37%
Cu 324.752†	240463.1	0.9991	mg/L	0.00265	0.9991	mg/L	0.00265	0.27%
Fe 273.955†	2539.8	2.076	mg/L	0.0265	2.076	mg/L	0.0265	1.28%
K 766.490†	37418.2	20.00	mg/L	0.269	20.00	mg/L	0.269	1.35%
Mg 279.077†	2873.1	2.065	mg/L	0.0346	2.065	mg/L	0.0346	1.67%
Mn 257.610†	33676.1	0.9938	mg/L	0.01564	0.9938	mg/L	0.01564	1.57%
Mo 202.031†	18736.8	0.9874	mg/L	0.00316	0.9874	mg/L	0.00316	0.32%
Na 589.592†	590463.3	49.39	mg/L	0.819	49.39	mg/L	0.819	1.66%
Na 330.237†	1428.7	52.36	mg/L	0.309	52.36	mg/L	0.309	0.59%
Ni 231.604†	3796.6	0.9899	mg/L	0.01505	0.9899	mg/L	0.01505	1.52%
Pb 220.353†	14529.4	1.905	mg/L	0.0089	1.905	mg/L	0.0089	0.47%
Sb 206.836†	6489.5	2.096	mg/L	0.0124	2.096	mg/L	0.0124	0.59%
Se 196.026†	2690.2	1.931	mg/L	0.0067	1.931	mg/L	0.0067	0.35%
Si 288.158†	4273.2	2.109	mg/L	0.0287	2.109	mg/L	0.0287	1.36%
Sn 189.927†	3700.7	1.010	mg/L	0.0034	1.010	mg/L	0.0034	0.34%
Sr 421.552†	847049.9	0.9656	mg/L	0.01471	0.9656	mg/L	0.01471	1.52%
Ti 334.903†	20037.8	1.027	mg/L	0.0159	1.027	mg/L	0.0159	1.55%
Tl 190.801†	4701.5	1.949	mg/L	0.0069	1.949	mg/L	0.0069	0.36%
V 292.402†	125979.2	1.037	mg/L	0.0042	1.037	mg/L	0.0042	0.40%
Zn 206.200†	3877.6	1.024	mg/L	0.0154	1.024	mg/L	0.0154	1.50%

Sequence No.: 12
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/15/2012 10:32:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2584539.0	103.1	%	0.63				0.62%
ScR 361.383	326278.4	100.3	%	0.59				0.59%
Ag 328.068†	23.0	0.00014	mg/L	0.000031	0.00014	mg/L	0.000031	22.78%
Al 308.215†	12.1	0.00712	mg/L	0.002343	0.00712	mg/L	0.002343	32.91%
As 188.979†	1.6	0.00097	mg/L	0.001505	0.00097	mg/L	0.001505	155.45%
B 249.677†	16.4	0.00224	mg/L	0.000530	0.00224	mg/L	0.000530	23.63%
Ba 233.527†	2.0	0.00048	mg/L	0.000085	0.00048	mg/L	0.000085	17.71%
Be 313.042†	69.4	0.00011	mg/L	0.000014	0.00011	mg/L	0.000014	12.95%
Ca 317.933†	241.7	0.01814	mg/L	0.001339	0.01814	mg/L	0.001339	7.38%
Cd 228.802†	4.2	0.00013	mg/L	0.000126	0.00013	mg/L	0.000126	94.39%
Co 228.616†	13.7	0.00042	mg/L	0.000056	0.00042	mg/L	0.000056	13.53%
Cr 267.716†	-3.8	-0.00065	mg/L	0.000463	-0.00065	mg/L	0.000463	70.84%
Cu 324.752†	22.9	0.00009	mg/L	0.000059	0.00009	mg/L	0.000059	62.02%
Fe 273.955†	9.8	0.00808	mg/L	0.001836	0.00808	mg/L	0.001836	22.74%
K 766.490†	-5.4	-0.00286	mg/L	0.018856	-0.00286	mg/L	0.018856	659.35%
Mg 279.077†	5.8	0.00412	mg/L	0.005386	0.00412	mg/L	0.005386	130.68%
Mn 257.610†	6.4	0.00019	mg/L	0.000190	0.00019	mg/L	0.000190	100.82%
Mo 202.031†	16.0	0.00084	mg/L	0.000196	0.00084	mg/L	0.000196	23.20%
Na 589.592†	52.0	0.00435	mg/L	0.001854	0.00435	mg/L	0.001854	42.62%
Na 330.237†	1.9	0.07061	mg/L	0.104915	0.07061	mg/L	0.104915	148.58%
Ni 231.604†	-2.2	-0.00056	mg/L	0.000805	-0.00056	mg/L	0.000805	143.23%
Pb 220.353†	7.4	0.00097	mg/L	0.000619	0.00097	mg/L	0.000619	63.57%
Sb 206.836†	10.0	0.00323	mg/L	0.000841	0.00323	mg/L	0.000841	26.02%
Se 196.026†	4.0	0.00287	mg/L	0.001445	0.00287	mg/L	0.001445	50.28%
Si 288.158†	-6.3	-0.00310	mg/L	0.000757	-0.00310	mg/L	0.000757	24.41%
Sn 189.927†	-0.4	-0.00011	mg/L	0.000916	-0.00011	mg/L	0.000916	854.54%
Sr 421.552†	194.6	0.00022	mg/L	0.000033	0.00022	mg/L	0.000033	14.82%
Ti 334.903†	29.7	0.00152	mg/L	0.000478	0.00152	mg/L	0.000478	31.40%
Tl 190.801†	-1.1	-0.00046	mg/L	0.001025	-0.00046	mg/L	0.001025	224.36%
V 292.402†	-3.3	-0.00003	mg/L	0.000073	-0.00003	mg/L	0.000073	236.27%
Zn 206.200†	2.1	0.00055	mg/L	0.000424	0.00055	mg/L	0.000424	77.79%

Sequence No.: 13
Sample ID: VS40 G SWC

Autosampler Location: 314
Date Collected: 11/15/2012 10:36:42 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS40 G SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2528790.1	100.8	%	0.52				0.52%
ScR 361.383	331288.1	101.8	%	0.35				0.34%
Ag 328.068†	-224.4	-0.00129	mg/L	0.000061	-0.00646	mg/L	0.000303	4.69%
Al 308.215†	145918.8	86.39	mg/L	0.693	432.0	mg/L	3.46	0.80%
As 188.979†	-20.4	0.05047	mg/L	0.003185	0.2524	mg/L	0.01593	6.31%
B 249.677†	164.4	0.02236	mg/L	0.001268	0.1118	mg/L	0.00634	5.67%
Ba 233.527†	3774.6	0.8735	mg/L	0.00080	4.367	mg/L	0.0040	0.09%
Be 313.042†	846.9	0.00127	mg/L	0.000015	0.00633	mg/L	0.000075	1.18%
Ca 317.933†	4657046.6	349.6	mg/L	2.28	1748	mg/L	11.39	0.65%
Cd 228.802†	61.5	0.00128	mg/L	0.000110	0.00640	mg/L	0.000551	8.60%
Co 228.616†	1861.5	0.05034	mg/L	0.000491	0.2517	mg/L	0.00245	0.98%
Cr 267.716†	836.0	0.1415	mg/L	0.00028	0.7074	mg/L	0.00138	0.19%
Cu 324.752†	102386.9	0.4291	mg/L	0.00521	2.145	mg/L	0.0261	1.21%
Fe 273.955†	118675.7	97.33	mg/L	0.565	486.6	mg/L	2.82	0.58%
K 766.490†	9027.8	4.825	mg/L	0.0805	24.12	mg/L	0.403	1.67%
Mg 279.077†	34823.6	24.89	mg/L	0.153	124.5	mg/L	0.76	0.61%
Mn 257.610†	72444.4	2.137	mg/L	0.0131	10.69	mg/L	0.066	0.61%
Mo 202.031†	187.2	0.00608	mg/L	0.000384	0.03040	mg/L	0.001920	6.32%
Na 589.592†	32398.3	2.710	mg/L	0.0294	13.55	mg/L	0.147	1.08%
Na 330.237†	78.9	3.264	mg/L	0.0656	16.32	mg/L	0.328	2.01%
Ni 231.604†	338.8	0.08833	mg/L	0.000559	0.4416	mg/L	0.00280	0.63%
Pb 220.353†	27225.8	3.584	mg/L	0.0690	17.92	mg/L	0.345	1.93%
Sb 206.836†	48.2	0.01557	mg/L	0.001157	0.07786	mg/L	0.005785	7.43%
Se 196.026†	-10.5	-0.00767	mg/L	0.004786	-0.03837	mg/L	0.023932	62.37%
Si 288.158†	1152.8	0.5722	mg/L	0.00758	2.861	mg/L	0.0379	1.32%
Sn 189.927†	12.9	0.04728	mg/L	0.001404	0.2364	mg/L	0.00702	2.97%
Sr 421.552†	969800.8	1.106	mg/L	0.0109	5.528	mg/L	0.0545	0.99%
Ti 334.903†	56174.4	2.867	mg/L	0.0221	14.33	mg/L	0.110	0.77%
Tl 190.801†	-1.8	0.00863	mg/L	0.000758	0.04313	mg/L	0.003788	8.78%
V 292.402†	23615.7	0.1895	mg/L	0.00227	0.9474	mg/L	0.01133	1.20%
Zn 206.200†	3350.1	0.8853	mg/L	0.00296	4.427	mg/L	0.0148	0.33%

Sequence No.: 14
Sample ID: VS40 H SWC

Del

Dilution: 5.000000X

Autosampler Location: 315
Date Collected: 11/15/2012 10:41:01 AM
Data Type: Original

Nebulizer Parameters: VS40 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540170.7	101.3	%	0.20				0.19%
ScR 361.383	322111.1	99.00	%	0.604				0.61%
Ag 328.068†	-314.8	-0.00183	mg/L	0.000073	-0.00914	mg/L	0.000363	3.97%
Al 308.215†	169739.0	100.5	mg/L	0.51	502.5	mg/L	2.53	0.50%
As 188.979†	33.2	0.06262	mg/L	0.003438	0.3131	mg/L	0.01719	5.49%
B 249.677†	189.9	0.02583	mg/L	0.000843	0.1291	mg/L	0.00421	3.26%
Ba 233.527†	5011.7	1.163	mg/L	0.0101	5.817	mg/L	0.0506	0.87%
Be 313.042†	961.6	0.00144	mg/L	0.000031	0.00722	mg/L	0.000154	2.13%
Ca 317.933†	8014703.3	601.7	mg/L	7.45	3008	mg/L	37.24	1.24%
Cd 228.802†	75.0	0.00145	mg/L	0.000011	0.00723	mg/L	0.000055	0.75%
Co 228.616†	2270.7	0.06300	mg/L	0.000190	0.3150	mg/L	0.00095	0.30%
Cr 267.716†	1014.2	0.1700	mg/L	0.00234	0.8500	mg/L	0.01172	1.38%
Cu 324.752†	130689.0	0.5472	mg/L	0.00172	2.736	mg/L	0.0086	0.31%
Fe 273.955†	130692.0	107.2	mg/L	0.36	535.9	mg/L	1.79	0.33%
K 766.490†	11455.9	6.122	mg/L	0.0697	30.61	mg/L	0.349	1.14%
Mg 279.077†	35395.2	25.30	mg/L	0.150	126.5	mg/L	0.75	0.59%
Mn 257.610†	81469.8	2.402	mg/L	0.0091	12.01	mg/L	0.046	0.38%
Mo 202.031†	284.1	0.00846	mg/L	0.000230	0.04229	mg/L	0.001151	2.72%
Na 589.592†	41868.9	3.502	mg/L	0.0141	17.51	mg/L	0.070	0.40%
Na 330.237†	109.0	4.134	mg/L	0.1089	20.67	mg/L	0.544	2.63%
Ni 231.604†	388.5	0.1013	mg/L	0.00235	0.5063	mg/L	0.01174	2.32%
Pb 220.353†	8924.1	1.188	mg/L	0.0036	5.942	mg/L	0.0180	0.30%
Sb 206.836†	35.9	0.01131	mg/L	0.002762	0.05657	mg/L	0.013810	24.41%
Se 196.026†	-14.0	-0.01023	mg/L	0.003680	-0.05116	mg/L	0.018399	35.96%
Si 288.158†	1272.9	0.6315	mg/L	0.00967	3.157	mg/L	0.0484	1.53%
Sn 189.927†	66.8	0.09305	mg/L	0.002557	0.4652	mg/L	0.01278	2.75%
Sr 421.552†	1549697.3	1.767	mg/L	0.0079	8.833	mg/L	0.0396	0.45%
Ti 334.903†	53813.5	2.734	mg/L	0.0119	13.67	mg/L	0.059	0.43%
Tl 190.801†	-11.7	0.00540	mg/L	0.002267	0.02698	mg/L	0.011333	42.01%
V 292.402†	26496.3	0.2130	mg/L	0.00094	1.065	mg/L	0.0047	0.44%
Zn 206.200†	5690.0	1.503	mg/L	0.0166	7.517	mg/L	0.0831	1.11%

Sequence No.: 15
Sample ID: VS40 I SWC

Dilution: 5.000000X

Del

Autosampler Location: 316
Date Collected: 11/15/2012 10:45:07 AM
Data Type: Original

Nebulizer Parameters: VS40 I SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2509223.8	100.1	%	0.40				0.40%
ScR 361.383	323833.9	99.53	%	0.839				0.84%
Ag 328.068†	-287.1	-0.00166	mg/L	0.000171	-0.00830	mg/L	0.000855	10.29%
Al 308.215†	172132.2	101.9	mg/L	0.51	509.6	mg/L	2.55	0.50%
As 188.979†	28.1	0.06711	mg/L	0.001268	0.3355	mg/L	0.00634	1.89%
B 249.677†	192.2	0.02613	mg/L	0.001036	0.1307	mg/L	0.00518	3.97%
Ba 233.527†	5005.6	1.162	mg/L	0.0124	5.810	mg/L	0.0618	1.06%
Be 313.042†	936.0	0.00140	mg/L	0.000024	0.00700	mg/L	0.000121	1.73%
Ca 317.933†	7963555.8	597.9	mg/L	8.77	2989	mg/L	43.83	1.47%
Cd 228.802†	74.0	0.00144	mg/L	0.000051	0.00718	mg/L	0.000257	3.57%
Co 228.616†	2261.0	0.06223	mg/L	0.000092	0.3111	mg/L	0.00046	0.15%
Cr 267.716†	1025.3	0.1718	mg/L	0.00150	0.8592	mg/L	0.00750	0.87%
Cu 324.752†	131794.1	0.5517	mg/L	0.00129	2.759	mg/L	0.0064	0.23%
Fe 273.955†	130451.0	107.0	mg/L	0.64	534.9	mg/L	3.22	0.60%
K 766.490†	11821.5	6.318	mg/L	0.0387	31.59	mg/L	0.193	0.61%
Mg 279.077†	36920.9	26.39	mg/L	0.091	132.0	mg/L	0.46	0.35%
Mn 257.610†	83808.6	2.471	mg/L	0.0156	12.36	mg/L	0.078	0.63%
Mo 202.031†	282.6	0.00842	mg/L	0.000074	0.04211	mg/L	0.000368	0.87%
Na 589.592†	42215.9	3.531	mg/L	0.0262	17.65	mg/L	0.131	0.74%
Na 330.237†	107.7	4.148	mg/L	0.2218	20.74	mg/L	1.109	5.35%
Ni 231.604†	399.2	0.1041	mg/L	0.00136	0.5204	mg/L	0.00682	1.31%
Pb 220.353†	19034.4	2.513	mg/L	0.0147	12.57	mg/L	0.073	0.58%
Sb 206.836†	46.8	0.01495	mg/L	0.001922	0.07476	mg/L	0.009612	12.86%
Se 196.026†	-12.1	-0.00887	mg/L	0.006601	-0.04436	mg/L	0.033003	74.40%
Si 288.158†	1111.7	0.5520	mg/L	0.00840	2.760	mg/L	0.0420	1.52%
Sn 189.927†	73.5	0.09448	mg/L	0.001723	0.4724	mg/L	0.00861	1.82%
Sr 421.552†	1542574.1	1.758	mg/L	0.0092	8.792	mg/L	0.0458	0.52%
Ti 334.903†	58677.2	2.983	mg/L	0.0147	14.92	mg/L	0.073	0.49%
Tl 190.801†	-9.4	0.00634	mg/L	0.001679	0.03172	mg/L	0.008396	26.47%
V 292.402†	26587.8	0.2136	mg/L	0.00048	1.068	mg/L	0.0024	0.22%
Zn 206.200†	5662.1	1.496	mg/L	0.0130	7.480	mg/L	0.0652	0.87%

Sequence No.: 16
Sample ID: VS40 J SWC

Dilution: 5.000000X

Autosampler Location: 317
Date Collected: 11/15/2012 10:49:14 AM
Data Type: Original

Nebulizer Parameters: VS40 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540956.7	101.3	%	0.74				0.73%
ScR 361.383	326122.7	100.2	%	0.34				0.34%
Ag 328.068†	-265.6	-0.00153	mg/L	0.000111	-0.00766	mg/L	0.000553	7.22%
Al 308.215†	168341.8	99.67	mg/L	0.602	498.3	mg/L	3.01	0.60%
As 188.979†	25.8	0.06201	mg/L	0.003052	0.3100	mg/L	0.01526	4.92%
B 249.677†	166.7	0.02266	mg/L	0.000901	0.1133	mg/L	0.00451	3.98%
Ba 233.527†	4509.9	1.046	mg/L	0.0025	5.228	mg/L	0.0127	0.24%
Be 313.042†	908.5	0.00136	mg/L	0.000028	0.00680	mg/L	0.000142	2.08%
Ca 317.933†	7139445.1	536.0	mg/L	1.65	2680	mg/L	8.25	0.31%
Cd 228.802†	66.3	0.00121	mg/L	0.000103	0.00607	mg/L	0.000513	8.45%
Co 228.616†	2245.5	0.06229	mg/L	0.000651	0.3114	mg/L	0.00325	1.05%
Cr 267.716†	926.6	0.1553	mg/L	0.00134	0.7764	mg/L	0.00672	0.87%
Cu 324.752†	121798.9	0.5101	mg/L	0.00183	2.550	mg/L	0.0092	0.36%
Fe 273.955†	127364.5	104.5	mg/L	0.29	522.3	mg/L	1.47	0.28%
K 766.490†	10745.0	5.743	mg/L	0.0283	28.71	mg/L	0.142	0.49%
Mg 279.077†	38836.3	27.76	mg/L	0.121	138.8	mg/L	0.61	0.44%
Mn 257.610†	83505.2	2.462	mg/L	0.0102	12.31	mg/L	0.051	0.42%
Mo 202.031†	264.2	0.00812	mg/L	0.000460	0.04062	mg/L	0.002298	5.66%
Na 589.592†	39196.3	3.278	mg/L	0.0330	16.39	mg/L	0.165	1.01%
Na 330.237†	93.8	3.625	mg/L	0.1807	18.12	mg/L	0.904	4.99%
Ni 231.604†	402.2	0.1048	mg/L	0.00235	0.5242	mg/L	0.01177	2.25%
Pb 220.353†	10174.2	1.352	mg/L	0.0162	6.761	mg/L	0.0810	1.20%
Sb 206.836†	25.6	0.00817	mg/L	0.001704	0.04086	mg/L	0.008518	20.85%
Se 196.026†	-7.9	-0.00581	mg/L	0.002436	-0.02907	mg/L	0.012179	41.89%
Si 288.158†	1169.2	0.5806	mg/L	0.00415	2.903	mg/L	0.0208	0.72%
Sn 189.927†	50.3	0.08042	mg/L	0.001052	0.4021	mg/L	0.00526	1.31%
Sr 421.552†	1374844.8	1.567	mg/L	0.0107	7.836	mg/L	0.0533	0.68%
Ti 334.903†	53636.3	2.728	mg/L	0.0150	13.64	mg/L	0.075	0.55%
Tl 190.801†	-2.5	0.00896	mg/L	0.000367	0.04481	mg/L	0.001833	4.09%
V 292.402†	26623.5	0.2141	mg/L	0.00048	1.070	mg/L	0.0024	0.22%
Zn 206.200†	5144.4	1.359	mg/L	0.0021	6.796	mg/L	0.0104	0.15%

Sequence No.: 17
Sample ID: VS40 F SWC

Autosampler Location: 318
Date Collected: 11/15/2012 10:53:20 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2546660.3	101.6	%	0.21				0.21%
ScR 361.383	324720.5	99.81	%	0.927				0.93%
Ag 328.068†	-197.6	-0.00116	mg/L	0.000258	-0.01159	mg/L	0.002579	22.25%
Al 308.215†	77391.4	45.82	mg/L	0.632	458.2	mg/L	6.32	1.38%
As 188.979†	26.5	0.03737	mg/L	0.001158	0.3737	mg/L	0.01158	3.10%
B 249.677†	94.3	0.01283	mg/L	0.001093	0.1283	mg/L	0.01093	8.52%
Ba 233.527†	2991.6	0.6967	mg/L	0.00800	6.967	mg/L	0.0800	1.15%
Be 313.042†	503.9	0.00076	mg/L	0.000040	0.00762	mg/L	0.000400	5.25%
Ca 317.933†	3456568.7	259.5	mg/L	1.50	2595	mg/L	15.03	0.58%
Cd 228.802†	38.1	0.00074	mg/L	0.000089	0.00738	mg/L	0.000890	12.06%
Co 228.616†	1028.9	0.02840	mg/L	0.000276	0.2840	mg/L	0.00276	0.97%
Cr 267.716†	410.6	0.06875	mg/L	0.000608	0.6875	mg/L	0.00608	0.88%
Cu 324.752†	63792.2	0.2670	mg/L	0.00089	2.670	mg/L	0.0089	0.33%
Fe 273.955†	60797.7	49.86	mg/L	0.580	498.6	mg/L	5.80	1.16%
K 766.490†	6105.4	3.263	mg/L	0.0483	32.63	mg/L	0.483	1.48%
Mg 279.077†	17055.6	12.19	mg/L	0.156	121.9	mg/L	1.56	1.28%
Mn 257.610†	38051.4	1.122	mg/L	0.0113	11.22	mg/L	0.113	1.01%
Mo 202.031†	157.3	0.00548	mg/L	0.000291	0.05482	mg/L	0.002915	5.32%
Na 589.592†	19559.8	1.636	mg/L	0.0242	16.36	mg/L	0.242	1.48%
Na 330.237†	43.6	1.697	mg/L	0.0545	16.97	mg/L	0.545	3.21%
Ni 231.604†	182.0	0.04743	mg/L	0.000239	0.4743	mg/L	0.00239	0.50%
Pb 220.353†	20134.1	2.647	mg/L	0.0056	26.47	mg/L	0.056	0.21%
Sb 206.836†	21.5	0.00686	mg/L	0.001011	0.06864	mg/L	0.010110	14.73%
Se 196.026†	-18.7	-0.01353	mg/L	0.003078	-0.1353	mg/L	0.03078	22.75%
Si 288.158†	514.7	0.2557	mg/L	0.00413	2.557	mg/L	0.0413	1.61%
Sn 189.927†	-7.6	0.03029	mg/L	0.000588	0.3029	mg/L	0.00588	1.94%
Sr 421.552†	720259.5	0.8210	mg/L	0.00593	8.210	mg/L	0.0593	0.72%
Ti 334.903†	25566.4	1.300	mg/L	0.0157	13.00	mg/L	0.157	1.20%
Tl 190.801†	5.6	0.00714	mg/L	0.001191	0.07139	mg/L	0.011908	16.68%
V 292.402†	11510.6	0.09234	mg/L	0.000369	0.9234	mg/L	0.00369	0.40%
Zn 206.200†	2331.1	0.6160	mg/L	0.00613	6.160	mg/L	0.0613	1.00%

Sequence No.: 18
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/15/2012 10:57:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2564876.2	102.3	%	0.50				0.49%
ScR 361.383	326522.0	100.4	%	0.63				0.62%
Ag 328.068†	164001.4	0.9851	mg/L	0.00611	0.9851	mg/L	0.00611	0.62%
Al 308.215†	3520.5	2.050	mg/L	0.0071	2.050	mg/L	0.0071	0.35%
As 188.979†	3452.9	1.981	mg/L	0.0141	1.981	mg/L	0.0141	0.71%
B 249.677†	7162.9	0.9778	mg/L	0.00566	0.9778	mg/L	0.00566	0.58%
Ba 233.527†	4438.4	1.045	mg/L	0.0020	1.045	mg/L	0.0020	0.19%
Be 313.042†	602735.7	0.9531	mg/L	0.00338	0.9531	mg/L	0.00338	0.35%
Ca 317.933†	28426.6	2.134	mg/L	0.0419	2.134	mg/L	0.0419	1.96%
Cd 228.802†	31500.7	1.044	mg/L	0.0093	1.044	mg/L	0.0093	0.89%
Co 228.616†	34149.4	1.048	mg/L	0.0092	1.048	mg/L	0.0092	0.87%
Cr 267.716†	6114.9	1.048	mg/L	0.0032	1.048	mg/L	0.0032	0.31%
Cu 324.752†	249526.6	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Fe 273.955†	2603.3	2.128	mg/L	0.0058	2.128	mg/L	0.0058	0.27%
K 766.490†	37521.6	20.05	mg/L	0.102	20.05	mg/L	0.102	0.51%
Mg 279.077†	2888.2	2.076	mg/L	0.0056	2.076	mg/L	0.0056	0.27%
Mn 257.610†	34241.3	1.011	mg/L	0.0063	1.011	mg/L	0.0063	0.62%
Mo 202.031†	19339.5	1.019	mg/L	0.0082	1.019	mg/L	0.0082	0.81%
Na 589.592†	589094.9	49.27	mg/L	0.074	49.27	mg/L	0.074	0.15%
Na 330.237†	1425.5	52.24	mg/L	0.164	52.24	mg/L	0.164	0.31%
Ni 231.604†	3787.8	0.9876	mg/L	0.00716	0.9876	mg/L	0.00716	0.72%
Pb 220.353†	14997.9	1.966	mg/L	0.0165	1.966	mg/L	0.0165	0.84%
Sb 206.836†	6472.7	2.090	mg/L	0.0179	2.090	mg/L	0.0179	0.86%
Se 196.026†	2711.4	1.946	mg/L	0.0121	1.946	mg/L	0.0121	0.62%
Si 288.158†	4289.5	2.118	mg/L	0.0140	2.118	mg/L	0.0140	0.66%
Sn 189.927†	3721.4	1.015	mg/L	0.0082	1.015	mg/L	0.0082	0.81%
Sr 421.552†	850889.5	0.9700	mg/L	0.00272	0.9700	mg/L	0.00272	0.28%
Ti 334.903†	20198.8	1.036	mg/L	0.0056	1.036	mg/L	0.0056	0.55%
Tl 190.801†	4676.7	1.939	mg/L	0.0178	1.939	mg/L	0.0178	0.92%
V 292.402†	125418.8	1.033	mg/L	0.0069	1.033	mg/L	0.0069	0.67%
Zn 206.200†	3897.4	1.029	mg/L	0.0040	1.029	mg/L	0.0040	0.39%

Sequence No.: 19
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/15/2012 11:02:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2568720.1	102.4	%	0.17				0.16%
ScR 361.383	326887.0	100.5	%	1.30				1.30%
Ag 328.068†	-8.8	-0.00005	mg/L	0.000084	-0.00005	mg/L	0.000084	158.42%
Al 308.215†	3.9	0.00229	mg/L	0.001374	0.00229	mg/L	0.001374	60.02%
As 188.979†	2.5	0.00145	mg/L	0.000324	0.00145	mg/L	0.000324	22.37%
B 249.677†	12.5	0.00171	mg/L	0.000706	0.00171	mg/L	0.000706	41.17%
Ba 233.527†	-0.5	-0.00013	mg/L	0.000361	-0.00013	mg/L	0.000361	285.82%
Be 313.042†	47.3	0.00007	mg/L	0.000024	0.00007	mg/L	0.000024	31.59%
Ca 317.933†	330.3	0.02480	mg/L	0.000793	0.02480	mg/L	0.000793	3.20%
Cd 228.802†	1.2	0.00003	mg/L	0.000066	0.00003	mg/L	0.000066	211.61%
Co 228.616†	15.8	0.00049	mg/L	0.000115	0.00049	mg/L	0.000115	23.65%
Cr 267.716†	-1.4	-0.00025	mg/L	0.000987	-0.00025	mg/L	0.000987	400.69%
Cu 324.752†	3.2	0.00001	mg/L	0.000084	0.00001	mg/L	0.000084	638.65%
Fe 273.955†	11.0	0.00899	mg/L	0.002082	0.00899	mg/L	0.002082	23.15%
K 766.490†	-19.4	-0.01035	mg/L	0.008605	-0.01035	mg/L	0.008605	83.14%
Mg 279.077†	2.6	0.00187	mg/L	0.002342	0.00187	mg/L	0.002342	125.44%
Mn 257.610†	9.5	0.00028	mg/L	0.000086	0.00028	mg/L	0.000086	30.77%
Mo 202.031†	18.2	0.00096	mg/L	0.000184	0.00096	mg/L	0.000184	19.19%
Na 589.592†	62.4	0.00522	mg/L	0.004246	0.00522	mg/L	0.004246	81.33%
Na 330.237†	13.5	0.4977	mg/L	0.28436	0.4977	mg/L	0.28436	57.14%
Ni 231.604†	-0.3	-0.00007	mg/L	0.000564	-0.00007	mg/L	0.000564	841.29%
Pb 220.353†	-1.9	-0.00025	mg/L	0.000470	-0.00025	mg/L	0.000470	189.97%
Sb 206.836†	8.7	0.00281	mg/L	0.002071	0.00281	mg/L	0.002071	73.69%
Se 196.026†	-1.0	-0.00074	mg/L	0.002167	-0.00074	mg/L	0.002167	292.98%
Si 288.158†	-5.7	-0.00279	mg/L	0.000649	-0.00279	mg/L	0.000649	23.29%
Sn 189.927†	-0.4	-0.00011	mg/L	0.000213	-0.00011	mg/L	0.000213	192.49%
Sr 421.552†	222.5	0.00025	mg/L	0.000045	0.00025	mg/L	0.000045	17.80%
Ti 334.903†	16.8	0.00086	mg/L	0.000864	0.00086	mg/L	0.000864	100.42%
Tl 190.801†	-1.2	-0.00048	mg/L	0.001131	-0.00048	mg/L	0.001131	233.60%
V 292.402†	6.1	0.00005	mg/L	0.000036	0.00005	mg/L	0.000036	73.55%
Zn 206.200†	0.2	0.00006	mg/L	0.000505	0.00006	mg/L	0.000505	787.85%

Sequence No.: 20
Sample ID: VS40 H SWC

Autosampler Location: 319
Date Collected: 11/15/2012 11:07:01 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2518258.6	100.4	%	0.92				0.91%
ScR 361.383	323688.4	99.49	%	0.468				0.47%
Ag 328.068†	-173.7	-0.00101	mg/L	0.000210	-0.01011	mg/L	0.002101	20.78%
Al 308.215†	86631.3	51.29	mg/L	0.437	512.9	mg/L	4.37	0.85%
As 188.979†	39.1	0.04510	mg/L	0.001684	0.4510	mg/L	0.01684	3.74%
B 249.677†	97.5	0.01325	mg/L	0.000594	0.1325	mg/L	0.00594	4.48%
Ba 233.527†	2531.3	0.5872	mg/L	0.00603	5.872	mg/L	0.0603	1.03%
Be 313.042†	506.4	0.00076	mg/L	0.000032	0.00761	mg/L	0.000320	4.20%
Ca 317.933†	4060005.6	304.8	mg/L	1.14	3048	mg/L	11.36	0.37%
Cd 228.802†	42.2	0.00077	mg/L	0.000135	0.00772	mg/L	0.001350	17.48%
Co 228.616†	1190.4	0.03307	mg/L	0.000334	0.3307	mg/L	0.00334	1.01%
Cr 267.716†	521.5	0.08751	mg/L	0.001609	0.8751	mg/L	0.01609	1.84%
Cu 324.752†	67381.0	0.2822	mg/L	0.00311	2.822	mg/L	0.0311	1.10%
Fe 273.955†	68850.0	56.46	mg/L	0.353	564.6	mg/L	3.53	0.63%
K 766.490†	5736.4	3.066	mg/L	0.0518	30.66	mg/L	0.518	1.69%
Mg 279.077†	18077.9	12.92	mg/L	0.104	129.2	mg/L	1.04	0.80%
Mn 257.610†	42462.1	1.252	mg/L	0.0086	12.52	mg/L	0.086	0.69%
Mo 202.031†	192.9	0.00687	mg/L	0.000660	0.06867	mg/L	0.006597	9.61%
Na 589.592†	20907.0	1.749	mg/L	0.0147	17.49	mg/L	0.147	0.84%
Na 330.237†	55.0	2.089	mg/L	0.1727	20.89	mg/L	1.727	8.27%
Ni 231.604†	204.6	0.05333	mg/L	0.000985	0.5333	mg/L	0.00985	1.85%
Pb 220.353†	4625.3	0.6157	mg/L	0.00714	6.157	mg/L	0.0714	1.16%
Sb 206.836†	14.5	0.00449	mg/L	0.001500	0.04487	mg/L	0.014998	33.43%
Se 196.026†	-11.3	-0.00818	mg/L	0.003761	-0.08176	mg/L	0.037606	46.00%
Si 288.158†	677.4	0.3361	mg/L	0.00836	3.361	mg/L	0.0836	2.49%
Sn 189.927†	7.8	0.04006	mg/L	0.001124	0.4006	mg/L	0.01124	2.81%
Sr 421.552†	784951.8	0.8948	mg/L	0.00339	8.948	mg/L	0.0339	0.38%
Ti 334.903†	27775.1	1.411	mg/L	0.0106	14.11	mg/L	0.106	0.75%
Tl 190.801†	8.9	0.00911	mg/L	0.001180	0.09114	mg/L	0.011803	12.95%
V 292.402†	13669.5	0.1098	mg/L	0.00153	1.098	mg/L	0.0153	1.40%
Zn 206.200†	2919.9	0.7715	mg/L	0.00784	7.715	mg/L	0.0784	1.02%

Sequence No.: 21
Sample ID: VS40 I SWC

Autosampler Location: 320
Date Collected: 11/15/2012 11:11:21 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 I SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS40 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2576234.2	102.7	%	0.44				0.43%
ScR 361.383	322104.5	99.00	%	0.541				0.55%
Ag 328.068†	-143.5	-0.00083	mg/L	0.000109	-0.00830	mg/L	0.001089	13.13%
Al 308.215†	86982.3	51.50	mg/L	0.209	515.0	mg/L	2.09	0.41%
As 188.979†	31.7	0.04411	mg/L	0.002218	0.4411	mg/L	0.02218	5.03%
B 249.677†	94.2	0.01280	mg/L	0.000177	0.1280	mg/L	0.00177	1.39%
Ba 233.527†	2558.3	0.5937	mg/L	0.00293	5.937	mg/L	0.0293	0.49%
Be 313.042†	517.1	0.00078	mg/L	0.000026	0.00777	mg/L	0.000264	3.40%
Ca 317.933†	4030563.0	302.6	mg/L	1.52	3026	mg/L	15.21	0.50%
Cd 228.802†	40.4	0.00075	mg/L	0.000046	0.00749	mg/L	0.000456	6.09%
Co 228.616†	1169.7	0.03224	mg/L	0.000525	0.3224	mg/L	0.00525	1.63%
Cr 267.716†	539.8	0.09060	mg/L	0.000700	0.9060	mg/L	0.00700	0.77%
Cu 324.752†	66611.9	0.2789	mg/L	0.00363	2.789	mg/L	0.0363	1.30%
Fe 273.955†	67577.9	55.42	mg/L	0.166	554.2	mg/L	1.66	0.30%
K 766.490†	5904.1	3.155	mg/L	0.0252	31.55	mg/L	0.252	0.80%
Mg 279.077†	18615.2	13.31	mg/L	0.089	133.1	mg/L	0.89	0.67%
Mn 257.610†	43040.0	1.269	mg/L	0.0055	12.69	mg/L	0.055	0.43%
Mo 202.031†	183.3	0.00639	mg/L	0.000262	0.06387	mg/L	0.002623	4.11%
Na 589.592†	21018.4	1.758	mg/L	0.0049	17.58	mg/L	0.049	0.28%
Na 330.237†	45.9	1.780	mg/L	0.1710	17.80	mg/L	1.710	9.61%
Ni 231.604†	206.6	0.05385	mg/L	0.002469	0.5385	mg/L	0.02469	4.59%
Pb 220.353†	9654.1	1.275	mg/L	0.0157	12.75	mg/L	0.157	1.23%
Sb 206.836†	23.9	0.00750	mg/L	0.002777	0.07500	mg/L	0.027770	37.03%
Se 196.026†	-16.0	-0.01155	mg/L	0.003000	-0.1155	mg/L	0.03000	25.97%
Si 288.158†	561.8	0.2790	mg/L	0.00318	2.790	mg/L	0.0318	1.14%
Sn 189.927†	5.6	0.03920	mg/L	0.001716	0.3920	mg/L	0.01716	4.38%
Sr 421.552†	779251.5	0.8883	mg/L	0.00456	8.883	mg/L	0.0456	0.51%
Ti 334.903†	29861.6	1.518	mg/L	0.0073	15.18	mg/L	0.073	0.48%
Tl 190.801†	3.7	0.00688	mg/L	0.001593	0.06877	mg/L	0.015933	23.17%
V 292.402†	13493.0	0.1084	mg/L	0.00120	1.084	mg/L	0.0120	1.11%
Zn 206.200†	2933.5	0.7751	mg/L	0.00561	7.751	mg/L	0.0561	0.72%

Sequence No.: 22
Sample ID: VS40 J SWC

Autosampler Location: 321
Date Collected: 11/15/2012 11:15:38 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VS40 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS40 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2571791.7	102.6	%	0.71				0.69%
ScR 361.383	322454.2	99.11	%	0.707				0.71%
Ag 328.068†	-173.0	-0.00101	mg/L	0.000180	-0.01007	mg/L	0.001799	17.87%
Al 308.215†	85746.1	50.77	mg/L	0.134	507.7	mg/L	1.34	0.26%
As 188.979†	33.8	0.04368	mg/L	0.004496	0.4368	mg/L	0.04496	10.29%
B 249.677†	82.4	0.01120	mg/L	0.000554	0.1120	mg/L	0.00554	4.94%
Ba 233.527†	2293.0	0.5313	mg/L	0.00641	5.313	mg/L	0.0641	1.21%
Be 313.042†	497.9	0.00075	mg/L	0.000002	0.00748	mg/L	0.000023	0.31%
Ca 317.933†	3601167.0	270.4	mg/L	2.49	2704	mg/L	24.94	0.92%
Cd 228.802†	41.7	0.00079	mg/L	0.000043	0.00792	mg/L	0.000426	5.38%
Co 228.616†	1162.8	0.03228	mg/L	0.000478	0.3228	mg/L	0.00478	1.48%
Cr 267.716†	480.5	0.08065	mg/L	0.000694	0.8065	mg/L	0.00694	0.86%
Cu 324.752†	61794.6	0.2589	mg/L	0.00201	2.589	mg/L	0.0201	0.78%
Fe 273.955†	66718.0	54.72	mg/L	0.162	547.2	mg/L	1.62	0.30%
K 766.490†	5373.2	2.872	mg/L	0.0242	28.72	mg/L	0.242	0.84%
Mg 279.077†	19670.0	14.06	mg/L	0.047	140.6	mg/L	0.47	0.33%
Mn 257.610†	43185.9	1.273	mg/L	0.0016	12.73	mg/L	0.016	0.13%
Mo 202.031†	173.8	0.00623	mg/L	0.000616	0.06234	mg/L	0.006157	9.88%
Na 589.592†	19426.7	1.625	mg/L	0.0059	16.25	mg/L	0.059	0.36%
Na 330.237†	48.4	1.868	mg/L	0.1291	18.68	mg/L	1.291	6.91%
Ni 231.604†	207.6	0.05411	mg/L	0.001584	0.5411	mg/L	0.01584	2.93%
Pb 220.353†	5146.3	0.6840	mg/L	0.00768	6.840	mg/L	0.0768	1.12%
Sb 206.836†	14.4	0.00452	mg/L	0.002525	0.04519	mg/L	0.025254	55.88%
Se 196.026†	-12.5	-0.00906	mg/L	0.002139	-0.09060	mg/L	0.021391	23.61%
Si 288.158†	590.5	0.2933	mg/L	0.00436	2.933	mg/L	0.0436	1.49%
Sn 189.927†	-4.0	0.03259	mg/L	0.001871	0.3259	mg/L	0.01871	5.74%
Sr 421.552†	696487.6	0.7939	mg/L	0.00758	7.939	mg/L	0.0758	0.96%
Ti 334.903†	27497.3	1.399	mg/L	0.0022	13.99	mg/L	0.022	0.16%
Tl 190.801†	9.1	0.00903	mg/L	0.002131	0.09027	mg/L	0.021307	23.60%
V 292.402†	13463.6	0.1082	mg/L	0.00082	1.082	mg/L	0.0082	0.76%
Zn 206.200†	2644.1	0.6986	mg/L	0.00692	6.986	mg/L	0.0692	0.99%

Sequence No.: 23
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 11/15/2012 11:19:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2571613.0	102.5	%	0.63				0.61%
ScR 361.383	324348.9	99.69	%	0.934				0.94%
Ag 328.068†	165212.6	0.9923	mg/L	0.00674	0.9923	mg/L	0.00674	0.68%
Al 308.215†	3524.8	2.052	mg/L	0.0183	2.052	mg/L	0.0183	0.89%
As 188.979†	3470.3	1.991	mg/L	0.0249	1.991	mg/L	0.0249	1.25%
B 249.677†	7191.9	0.9818	mg/L	0.01110	0.9818	mg/L	0.01110	1.13%
Ba 233.527†	4441.5	1.046	mg/L	0.0091	1.046	mg/L	0.0091	0.87%
Be 313.042†	608188.3	0.9617	mg/L	0.00912	0.9617	mg/L	0.00912	0.95%
Ca 317.933†	27937.1	2.097	mg/L	0.0247	2.097	mg/L	0.0247	1.18%
Cd 228.802†	31613.8	1.048	mg/L	0.0053	1.048	mg/L	0.0053	0.51%
Co 228.616†	33422.2	1.026	mg/L	0.0075	1.026	mg/L	0.0075	0.73%
Cr 267.716†	6127.7	1.050	mg/L	0.0120	1.050	mg/L	0.0120	1.15%
Cu 324.752†	250788.6	1.042	mg/L	0.0066	1.042	mg/L	0.0066	0.64%
Fe 273.955†	2614.5	2.137	mg/L	0.0320	2.137	mg/L	0.0320	1.50%
K 766.490†	37650.9	20.12	mg/L	0.121	20.12	mg/L	0.121	0.60%
Mg 279.077†	2896.8	2.082	mg/L	0.0213	2.082	mg/L	0.0213	1.02%
Mn 257.610†	34445.7	1.017	mg/L	0.0098	1.017	mg/L	0.0098	0.96%
Mo 202.031†	18957.7	0.9990	mg/L	0.00685	0.9990	mg/L	0.00685	0.69%
Na 589.592†	593914.3	49.67	mg/L	0.391	49.67	mg/L	0.391	0.79%
Na 330.237†	1431.5	52.46	mg/L	0.516	52.46	mg/L	0.516	0.98%
Ni 231.604†	3801.5	0.9912	mg/L	0.00866	0.9912	mg/L	0.00866	0.87%
Pb 220.353†	14677.8	1.924	mg/L	0.0128	1.924	mg/L	0.0128	0.67%
Sb 206.836†	6520.2	2.106	mg/L	0.0253	2.106	mg/L	0.0253	1.20%
Se 196.026†	2721.2	1.953	mg/L	0.0306	1.953	mg/L	0.0306	1.56%
Si 288.158†	4305.3	2.125	mg/L	0.0207	2.125	mg/L	0.0207	0.97%
Sn 189.927†	3748.6	1.023	mg/L	0.0135	1.023	mg/L	0.0135	1.32%
Sr 421.552†	857032.3	0.9770	mg/L	0.00744	0.9770	mg/L	0.00744	0.76%
Ti 334.903†	20324.8	1.042	mg/L	0.0096	1.042	mg/L	0.0096	0.92%
Tl 190.801†	4687.0	1.943	mg/L	0.0256	1.943	mg/L	0.0256	1.32%
V 292.402†	126407.4	1.041	mg/L	0.0078	1.041	mg/L	0.0078	0.75%
Zn 206.200†	3899.6	1.030	mg/L	0.0094	1.030	mg/L	0.0094	0.91%

Sequence No.: 24
Sample ID: CB 4

Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 11:25:02 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2564028.2	102.2	%	0.37				0.36%
ScR 361.383	328203.4	100.9	%	1.13				1.12%
Ag 328.068†	19.2	0.00012	mg/L	0.000166	0.00012	mg/L	0.000166	143.99%
Al 308.215†	0.2	0.00010	mg/L	0.002795	0.00010	mg/L	0.002795	>999.9%
As 188.979†	1.5	0.00087	mg/L	0.001211	0.00087	mg/L	0.001211	139.03%
B 249.677†	10.0	0.00137	mg/L	0.000263	0.00137	mg/L	0.000263	19.16%
Ba 233.527†	-2.3	-0.00054	mg/L	0.000534	-0.00054	mg/L	0.000534	98.30%
Be 313.042†	34.3	0.00005	mg/L	0.000039	0.00005	mg/L	0.000039	71.99%
Ca 317.933†	75.8	0.00569	mg/L	0.004686	0.00569	mg/L	0.004686	82.35%
Cd 228.802†	-2.6	-0.00009	mg/L	0.000054	-0.00009	mg/L	0.000054	57.28%
Co 228.616†	13.7	0.00042	mg/L	0.000088	0.00042	mg/L	0.000088	20.92%
Cr 267.716†	1.5	0.00026	mg/L	0.001063	0.00026	mg/L	0.001063	413.94%
Cu 324.752†	-38.0	-0.00016	mg/L	0.000034	-0.00016	mg/L	0.000034	21.27%
Fe 273.955†	3.2	0.00264	mg/L	0.001543	0.00264	mg/L	0.001543	58.52%
K 766.490†	6.9	0.00370	mg/L	0.002988	0.00370	mg/L	0.002988	80.69%
Mg 279.077†	-1.9	-0.00135	mg/L	0.002351	-0.00135	mg/L	0.002351	174.64%
Mn 257.610†	0.4	0.00001	mg/L	0.000052	0.00001	mg/L	0.000052	488.45%
Mo 202.031†	19.9	0.00105	mg/L	0.000218	0.00105	mg/L	0.000218	20.82%
Na 589.592†	42.3	0.00353	mg/L	0.003014	0.00353	mg/L	0.003014	85.27%
Na 330.237†	4.1	0.1495	mg/L	0.07843	0.1495	mg/L	0.07843	52.44%
Ni 231.604†	-1.8	-0.00047	mg/L	0.000063	-0.00047	mg/L	0.000063	13.62%
Pb 220.353†	2.7	0.00035	mg/L	0.000467	0.00035	mg/L	0.000467	133.23%
Sb 206.836†	15.0	0.00484	mg/L	0.000786	0.00484	mg/L	0.000786	16.23%
Se 196.026†	0.3	0.00024	mg/L	0.001374	0.00024	mg/L	0.001374	574.44%
Si 288.158†	-0.8	-0.00042	mg/L	0.003954	-0.00042	mg/L	0.003954	932.96%
Sn 189.927†	5.3	0.00146	mg/L	0.000304	0.00146	mg/L	0.000304	20.84%
Sr 421.552†	121.3	0.00014	mg/L	0.000019	0.00014	mg/L	0.000019	13.54%
Ti 334.903†	20.5	0.00105	mg/L	0.000613	0.00105	mg/L	0.000613	58.28%
Tl 190.801†	-4.6	-0.00194	mg/L	0.002127	-0.00194	mg/L	0.002127	109.84%
V 292.402†	15.5	0.00013	mg/L	0.000149	0.00013	mg/L	0.000149	116.14%
Zn 206.200†	1.8	0.00048	mg/L	0.000580	0.00048	mg/L	0.000580	121.97%

Sequence No.: 25
Sample ID: VR30 MB1 SWC

Autosampler Location: 322
Date Collected: 11/15/2012 11:29:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2599167.6	103.6	%	0.14				0.13%
ScR 361.383	335819.8	103.2	%	1.05				1.02%
Ag 328.068†	-40.8	-0.00025	mg/L	0.000148	-0.00049	mg/L	0.000295	60.23%
Al 308.215†	-7.7	-0.00457	mg/L	0.003986	-0.00913	mg/L	0.007971	87.28%
As 188.979†	1.5	0.00086	mg/L	0.002224	0.00173	mg/L	0.004449	257.53%
B 249.677†	9.4	0.00128	mg/L	0.000825	0.00257	mg/L	0.001649	64.23%
Ba 233.527†	0.9	0.00022	mg/L	0.000596	0.00043	mg/L	0.001191	275.33%
Be 313.042†	-32.0	-0.00005	mg/L	0.000015	-0.00010	mg/L	0.000031	30.47%
Ca 317.933†	87.1	0.00654	mg/L	0.000467	0.01307	mg/L	0.000935	7.15%
Cd 228.802†	-4.9	-0.00017	mg/L	0.000030	-0.00034	mg/L	0.000060	17.60%
Co 228.616†	9.3	0.00028	mg/L	0.000025	0.00057	mg/L	0.000051	8.95%
Cr 267.716†	1.7	0.00029	mg/L	0.000198	0.00058	mg/L	0.000395	67.78%
Cu 324.752†	-45.8	-0.00019	mg/L	0.000133	-0.00038	mg/L	0.000266	69.89%
Fe 273.955†	10.2	0.00838	mg/L	0.000547	0.01677	mg/L	0.001093	6.52%
K 766.490†	-27.5	-0.01472	mg/L	0.001665	-0.02944	mg/L	0.003330	11.31%
Mg 279.077†	0.9	0.00063	mg/L	0.002623	0.00126	mg/L	0.005247	415.82%
Mn 257.610†	12.7	0.00037	mg/L	0.000097	0.00075	mg/L	0.000194	25.93%
Mo 202.031†	1.0	0.00005	mg/L	0.000292	0.00010	mg/L	0.000584	563.08%
Na 589.592†	61.5	0.00515	mg/L	0.004494	0.01030	mg/L	0.008989	87.31%
Na 330.237†	11.1	0.3997	mg/L	0.35689	0.7994	mg/L	0.71378	89.29%
Ni 231.604†	2.5	0.00065	mg/L	0.001536	0.00130	mg/L	0.003072	236.63%
Pb 220.353†	-0.7	-0.00009	mg/L	0.001347	-0.00018	mg/L	0.002695	>999.9%
Sb 206.836†	1.4	0.00046	mg/L	0.000687	0.00093	mg/L	0.001373	148.14%
Se 196.026†	1.4	0.00100	mg/L	0.002036	0.00200	mg/L	0.004072	203.28%
Si 288.158†	-0.6	-0.00028	mg/L	0.003358	-0.00057	mg/L	0.006717	>999.9%
Sn 189.927†	-0.5	-0.00012	mg/L	0.000472	-0.00024	mg/L	0.000944	387.75%
Sr 421.552†	53.3	0.00006	mg/L	0.000007	0.00012	mg/L	0.000013	11.04%
Ti 334.903†	9.2	0.00047	mg/L	0.001421	0.00094	mg/L	0.002843	301.07%
Tl 190.801†	-1.7	-0.00071	mg/L	0.001561	-0.00142	mg/L	0.003121	219.73%
V 292.402†	12.4	0.00010	mg/L	0.000148	0.00020	mg/L	0.000295	144.26%
Zn 206.200†	101.3	0.02677	mg/L	0.000265	0.05355	mg/L	0.000530	0.99%

Sequence No.: 26
Sample ID: VR30 B SWC

Dilution: 2.000000X

Del

Autosampler Location: 323
Date Collected: 11/15/2012 11:33:36 AM
Data Type: Original

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2605537.2	103.9	%	0.03				0.03%
ScR 361.383	335963.5	103.3	%	0.88				0.86%
Ag 328.068†	-505.6	-0.00291	mg/L	0.000175	-0.00581	mg/L	0.000349	6.01%
Al 308.215†	380896.8	225.5	mg/L	1.00	451.0	mg/L	2.01	0.45%
As 188.979†	107.3	0.1727	mg/L	0.00048	0.3455	mg/L	0.00096	0.28%
B 249.677†	74.3	0.00985	mg/L	0.000808	0.01971	mg/L	0.001617	8.20%
Ba 233.527†	44913.3	10.52	mg/L	0.073	21.04	mg/L	0.147	0.70%
Be 313.042†	7015.2	0.01096	mg/L	0.000088	0.02192	mg/L	0.000176	0.80%
Ca 317.933†	965238.3	72.46	mg/L	0.625	144.9	mg/L	1.25	0.86%
Cd 228.802†	745.7	0.02098	mg/L	0.000201	0.04196	mg/L	0.000402	0.96%
Co 228.616†	4936.3	0.1380	mg/L	0.00109	0.2760	mg/L	0.00217	0.79%
Cr 267.716†	1523.9	0.2684	mg/L	0.00057	0.5367	mg/L	0.00114	0.21%
Cu 324.752†	41236.6	0.1875	mg/L	0.00196	0.3749	mg/L	0.00393	1.05%
Fe 273.955†	479889.0	393.6	mg/L	3.18	787.1	mg/L	6.36	0.81%
K 766.490†	32663.4	17.46	mg/L	0.055	34.91	mg/L	0.110	0.32%
Mg 279.077†	88101.9	62.90	mg/L	0.429	125.8	mg/L	0.86	0.68%
Mn 257.610†	761978.3	22.48	mg/L	0.154	44.96	mg/L	0.308	0.69%
Mo 202.031†	182.0	0.00879	mg/L	0.000594	0.01759	mg/L	0.001188	6.75%
Na 589.592†	13041.1	1.091	mg/L	0.0088	2.181	mg/L	0.0176	0.80%
Na 330.237†	4.2	0.4314	mg/L	0.37031	0.8628	mg/L	0.74062	85.84%
Ni 231.604†	662.2	0.1726	mg/L	0.00386	0.3453	mg/L	0.00772	2.23%
Pb 220.353†	5328.1	0.7361	mg/L	0.00529	1.472	mg/L	0.0106	0.72%
Sb 206.836†	57.6	0.01828	mg/L	0.002293	0.03655	mg/L	0.004587	12.55%
Se 196.026†	26.5	0.01870	mg/L	0.007613	0.03740	mg/L	0.015226	40.71%
Si 288.158†	6551.8	3.243	mg/L	0.0146	6.486	mg/L	0.0291	0.45%
Sn 189.927†	-58.8	-0.00645	mg/L	0.002437	-0.01290	mg/L	0.004874	37.80%
Sr 421.552†	495793.0	0.5652	mg/L	0.00198	1.130	mg/L	0.0040	0.35%
Ti 334.903†	79253.5	4.065	mg/L	0.0162	8.129	mg/L	0.0324	0.40%
Tl 190.801†	-97.8	-0.00111	mg/L	0.003096	-0.00222	mg/L	0.006191	279.17%
V 292.402†	54622.9	0.4362	mg/L	0.00254	0.8724	mg/L	0.00507	0.58%
Zn 206.200†	7452.3	1.969	mg/L	0.0151	3.938	mg/L	0.0302	0.77%

Sequence No.: 27
Sample ID: VR30 C SWC

Autosampler Location: 324
Date Collected: 11/15/2012 11:37:39 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 C SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2592456.5	103.4	%	0.55				0.54%
ScR 361.383	339510.9	104.4	%	1.04				1.00%
Ag 328.068†	-425.9	-0.00244	mg/L	0.000087	-0.00488	mg/L	0.000174	3.56%
Al 308.215†	393885.1	233.2	mg/L	2.94	466.4	mg/L	5.87	1.26%
As 188.979†	-107.3	0.1144	mg/L	0.00323	0.2288	mg/L	0.00647	2.83%
B 249.677†	138.0	0.01862	mg/L	0.000903	0.03724	mg/L	0.001807	4.85%
Ba 233.527†	18457.4	4.310	mg/L	0.0357	8.620	mg/L	0.0714	0.83%
Be 313.042†	5166.1	0.00801	mg/L	0.000048	0.01603	mg/L	0.000095	0.59%
Ca 317.933†	694021.5	52.10	mg/L	0.649	104.2	mg/L	1.30	1.25%
Cd 228.802†	414.2	0.01217	mg/L	0.000182	0.02434	mg/L	0.000364	1.49%
Co 228.616†	3732.4	0.09925	mg/L	0.000739	0.1985	mg/L	0.00148	0.74%
Cr 267.716†	1487.7	0.2578	mg/L	0.00169	0.5156	mg/L	0.00337	0.65%
Cu 324.752†	46993.7	0.2042	mg/L	0.00127	0.4084	mg/L	0.00255	0.62%
Fe 273.955†	293232.9	240.5	mg/L	3.16	481.0	mg/L	6.33	1.32%
K 766.490†	26037.3	13.92	mg/L	0.180	27.83	mg/L	0.359	1.29%
Mg 279.077†	81997.3	58.61	mg/L	0.793	117.2	mg/L	1.59	1.35%
Mn 257.610†	353552.5	10.43	mg/L	0.135	20.86	mg/L	0.269	1.29%
Mo 202.031†	95.0	0.00443	mg/L	0.000207	0.00886	mg/L	0.000415	4.68%
Na 589.592†	18853.7	1.577	mg/L	0.0181	3.154	mg/L	0.0362	1.15%
Na 330.237†	0.2	1.016	mg/L	0.0677	2.032	mg/L	0.1354	6.66%
Ni 231.604†	812.3	0.2118	mg/L	0.00238	0.4235	mg/L	0.00477	1.13%
Pb 220.353†	4047.1	0.5764	mg/L	0.00520	1.153	mg/L	0.0104	0.90%
Sb 206.836†	32.9	0.01119	mg/L	0.001175	0.02239	mg/L	0.002349	10.49%
Se 196.026†	26.7	0.01885	mg/L	0.004613	0.03770	mg/L	0.009226	24.47%
Si 288.158†	7078.4	3.502	mg/L	0.0150	7.005	mg/L	0.0301	0.43%
Sn 189.927†	-42.6	-0.00424	mg/L	0.002101	-0.00848	mg/L	0.004201	49.53%
Sr 421.552†	513657.8	0.5855	mg/L	0.00753	1.171	mg/L	0.0151	1.29%
Ti 334.903†	121465.6	6.233	mg/L	0.0757	12.47	mg/L	0.151	1.21%
Tl 190.801†	-56.8	-0.00009	mg/L	0.001491	-0.00019	mg/L	0.002983	>999.9%
V 292.402†	50152.4	0.4018	mg/L	0.00157	0.8037	mg/L	0.00314	0.39%
Zn 206.200†	4698.2	1.241	mg/L	0.0096	2.483	mg/L	0.0193	0.78%

Sequence No.: 28
Sample ID: VR30 D SWC

Dilution: 2.000000X

Autosampler Location: 325
Date Collected: 11/15/2012 11:41:41 AM
Data Type: Original

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2629496.9	104.9	%	0.36				0.34%
ScR 361.383	340969.8	104.8	%	0.78				0.75%
Ag 328.068†	-447.3	-0.00257	mg/L	0.000054	-0.00515	mg/L	0.000108	2.09%
Al 308.215†	464884.1	275.2	mg/L	3.66	550.5	mg/L	7.33	1.33%
As 188.979†	-163.5	0.1107	mg/L	0.00413	0.2215	mg/L	0.00826	3.73%
B 249.677†	155.0	0.02097	mg/L	0.000263	0.04193	mg/L	0.000525	1.25%
Ba 233.527†	15894.3	3.707	mg/L	0.0438	7.414	mg/L	0.0875	1.18%
Be 313.042†	5225.9	0.00810	mg/L	0.000092	0.01620	mg/L	0.000184	1.14%
Ca 317.933†	743732.1	55.83	mg/L	0.773	111.7	mg/L	1.55	1.38%
Cd 228.802†	423.9	0.01278	mg/L	0.000366	0.02556	mg/L	0.000732	2.86%
Co 228.616†	3513.9	0.09073	mg/L	0.000890	0.1815	mg/L	0.00178	0.98%
Cr 267.716†	1557.9	0.2696	mg/L	0.00276	0.5393	mg/L	0.00552	1.02%
Cu 324.752†	52401.1	0.2262	mg/L	0.00101	0.4524	mg/L	0.00203	0.45%
Fe 273.955†	286058.6	234.6	mg/L	3.59	469.2	mg/L	7.17	1.53%
K 766.490†	24358.6	13.02	mg/L	0.136	26.04	mg/L	0.271	1.04%
Mg 279.077†	84636.1	60.50	mg/L	0.874	121.0	mg/L	1.75	1.44%
Mn 257.610†	274061.0	8.085	mg/L	0.1180	16.17	mg/L	0.236	1.46%
Mo 202.031†	90.7	0.00416	mg/L	0.000561	0.00833	mg/L	0.001123	13.48%
Na 589.592†	22981.4	1.922	mg/L	0.0294	3.844	mg/L	0.0588	1.53%
Na 330.237†	0.1	1.244	mg/L	0.1244	2.487	mg/L	0.2488	10.00%
Ni 231.604†	856.3	0.2232	mg/L	0.00348	0.4464	mg/L	0.00695	1.56%
Pb 220.353†	4679.7	0.6696	mg/L	0.00318	1.339	mg/L	0.0064	0.47%
Sb 206.836†	20.3	0.00728	mg/L	0.000879	0.01456	mg/L	0.001758	12.07%
Se 196.026†	33.4	0.02371	mg/L	0.006893	0.04741	mg/L	0.013787	29.08%
Si 288.158†	3857.0	1.912	mg/L	0.0273	3.824	mg/L	0.0547	1.43%
Sn 189.927†	-52.4	-0.00632	mg/L	0.001595	-0.01264	mg/L	0.003190	25.25%
Sr 421.552†	582491.0	0.6640	mg/L	0.00959	1.328	mg/L	0.0192	1.44%
Ti 334.903†	140802.3	7.225	mg/L	0.1028	14.45	mg/L	0.206	1.42%
Tl 190.801†	-50.6	0.00198	mg/L	0.000955	0.00395	mg/L	0.001909	48.29%
V 292.402†	47545.5	0.3798	mg/L	0.00137	0.7596	mg/L	0.00275	0.36%
Zn 206.200†	4644.9	1.227	mg/L	0.0137	2.454	mg/L	0.0274	1.11%

Sequence No.: 29
Sample ID: VR30 A-L SWC

Autosampler Location: 326
Date Collected: 11/15/2012 11:45:43 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: VR30 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622888.5	104.6	%	0.59				0.57%
ScR 361.383	338611.2	104.1	%	0.08				0.08%
Ag 328.068†	-96.0	-0.00055	mg/L	0.000262	-0.00553	mg/L	0.002617	47.28%
Al 308.215†	65749.6	38.93	mg/L	0.113	389.3	mg/L	1.13	0.29%
As 188.979†	-29.1	0.02297	mg/L	0.001428	0.2297	mg/L	0.01428	6.21%
B 249.677†	40.1	0.00543	mg/L	0.001145	0.05431	mg/L	0.011445	21.07%
Ba 233.527†	5183.4	1.215	mg/L	0.0064	12.15	mg/L	0.064	0.53%
Be 313.042†	840.2	0.00130	mg/L	0.000006	0.01296	mg/L	0.000063	0.49%
Ca 317.933†	263053.0	19.75	mg/L	0.085	197.5	mg/L	0.85	0.43%
Cd 228.802†	189.5	0.00612	mg/L	0.000061	0.06116	mg/L	0.000613	1.00%
Co 228.616†	831.2	0.02217	mg/L	0.000200	0.2217	mg/L	0.00200	0.90%
Cr 267.716†	574.8	0.09821	mg/L	0.001610	0.9821	mg/L	0.01610	1.64%
Cu 324.752†	11445.0	0.04900	mg/L	0.000454	0.4900	mg/L	0.00454	0.93%
Fe 273.955†	50999.7	41.83	mg/L	0.023	418.3	mg/L	0.23	0.05%
K 766.490†	5183.8	2.770	mg/L	0.0111	27.70	mg/L	0.111	0.40%
Mg 279.077†	22144.4	15.84	mg/L	0.066	158.4	mg/L	0.66	0.41%
Mn 257.610†	144379.8	4.259	mg/L	0.0057	42.59	mg/L	0.057	0.13%
Mo 202.031†	44.5	0.00213	mg/L	0.000123	0.02128	mg/L	0.001227	5.77%
Na 589.592†	3227.5	0.2700	mg/L	0.00304	2.700	mg/L	0.0304	1.13%
Na 330.237†	-2.9	0.1185	mg/L	0.06573	1.185	mg/L	0.6573	55.46%
Ni 231.604†	231.9	0.06046	mg/L	0.000592	0.6046	mg/L	0.00592	0.98%
Pb 220.353†	1930.4	0.2606	mg/L	0.00176	2.606	mg/L	0.0176	0.68%
Sb 206.836†	9.4	0.00246	mg/L	0.002551	0.02460	mg/L	0.025511	103.69%
Se 196.026†	6.1	0.00433	mg/L	0.003821	0.04333	mg/L	0.038211	88.19%
Si 288.158†	1732.3	0.8574	mg/L	0.01491	8.574	mg/L	0.1491	1.74%
Sn 189.927†	-29.0	-0.00525	mg/L	0.000928	-0.05254	mg/L	0.009282	17.67%
Sr 421.552†	165817.6	0.1890	mg/L	0.00058	1.890	mg/L	0.0058	0.30%
Ti 334.903†	27725.7	1.422	mg/L	0.0037	14.22	mg/L	0.037	0.26%
Tl 190.801†	-6.2	0.00144	mg/L	0.000661	0.01439	mg/L	0.006615	45.96%
V 292.402†	9663.5	0.07802	mg/L	0.000606	0.7802	mg/L	0.00606	0.78%
Zn 206.200†	1155.2	0.3052	mg/L	0.00257	3.052	mg/L	0.0257	0.84%

Sequence No.: 30
Sample ID: VR30 A SWC

Autosampler Location: 327
Date Collected: 11/15/2012 11:49:44 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2608448.4	104.0	%	0.44				0.42%
ScR 361.383	332092.0	102.1	%	1.95				1.91%
Ag 328.068†	-332.8	-0.00189	mg/L	0.000123	-0.00378	mg/L	0.000246	6.52%
Al 308.215†	331246.8	196.1	mg/L	1.87	392.2	mg/L	3.74	0.95%
As 188.979†	-140.4	0.1165	mg/L	0.00181	0.2330	mg/L	0.00362	1.55%
B 249.677†	182.3	0.02467	mg/L	0.001143	0.04934	mg/L	0.002286	4.63%
Ba 233.527†	25625.1	6.005	mg/L	0.1354	12.01	mg/L	0.271	2.25%
Be 313.042†	4198.1	0.00648	mg/L	0.000145	0.01296	mg/L	0.000290	2.23%
Ca 317.933†	1301418.1	97.70	mg/L	1.119	195.4	mg/L	2.24	1.15%
Cd 228.802†	945.3	0.03053	mg/L	0.000471	0.06106	mg/L	0.000942	1.54%
Co 228.616†	3898.8	0.1031	mg/L	0.00201	0.2061	mg/L	0.00402	1.95%
Cr 267.716†	2810.9	0.4801	mg/L	0.00944	0.9603	mg/L	0.01888	1.97%
Cu 324.752†	58130.7	0.2486	mg/L	0.00265	0.4972	mg/L	0.00529	1.06%
Fe 273.955†	250250.6	205.2	mg/L	2.81	410.5	mg/L	5.62	1.37%
K 766.490†	26562.9	14.20	mg/L	0.118	28.39	mg/L	0.236	0.83%
Mg 279.077†	110384.9	78.96	mg/L	0.947	157.9	mg/L	1.89	1.20%
Mn 257.610†	710510.6	20.96	mg/L	0.264	41.92	mg/L	0.527	1.26%
Mo 202.031†	134.0	0.00598	mg/L	0.000636	0.01196	mg/L	0.001272	10.63%
Na 589.592†	16666.5	1.394	mg/L	0.0104	2.788	mg/L	0.0209	0.75%
Na 330.237†	-11.7	0.6871	mg/L	0.36186	1.374	mg/L	0.7237	52.67%
Ni 231.604†	1146.2	0.2988	mg/L	0.00878	0.5975	mg/L	0.01755	2.94%
Pb 220.353†	9140.9	1.237	mg/L	0.0199	2.473	mg/L	0.0398	1.61%
Sb 206.836†	33.7	0.00840	mg/L	0.001945	0.01680	mg/L	0.003891	23.16%
Se 196.026†	31.0	0.02195	mg/L	0.004275	0.04390	mg/L	0.008551	19.48%
Si 288.158†	9147.5	4.527	mg/L	0.0743	9.053	mg/L	0.1487	1.64%
Sn 189.927†	-53.4	-0.00141	mg/L	0.002032	-0.00283	mg/L	0.004064	143.81%
Sr 421.552†	831009.7	0.9473	mg/L	0.00820	1.895	mg/L	0.0164	0.87%
Ti 334.903†	137685.2	7.063	mg/L	0.0710	14.13	mg/L	0.142	1.01%
Tl 190.801†	-38.0	0.00395	mg/L	0.002952	0.00790	mg/L	0.005904	74.73%
V 292.402†	46662.5	0.3766	mg/L	0.00368	0.7532	mg/L	0.00735	0.98%
Zn 206.200†	5664.2	1.497	mg/L	0.0325	2.993	mg/L	0.0649	2.17%

Sequence No.: 31
Sample ID: VR30 ADUP SWC

Autosampler Location: 328
Date Collected: 11/15/2012 11:53:48 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2610927.2	104.1	%	0.28				0.27%
ScR 361.383	333670.2	102.6	%	0.09				0.09%
Ag 328.068†	-296.3	-0.00168	mg/L	0.000166	-0.00336	mg/L	0.000331	9.84%
Al 308.215†	299620.7	177.4	mg/L	1.16	354.8	mg/L	2.32	0.65%
As 188.979†	-149.0	0.1066	mg/L	0.00607	0.2133	mg/L	0.01214	5.69%
B 249.677†	164.8	0.02230	mg/L	0.000416	0.04460	mg/L	0.000832	1.87%
Ba 233.527†	23589.0	5.527	mg/L	0.0205	11.05	mg/L	0.041	0.37%
Be 313.042†	3693.1	0.00569	mg/L	0.000028	0.01138	mg/L	0.000056	0.49%
Ca 317.933†	1219617.2	91.56	mg/L	0.770	183.1	mg/L	1.54	0.84%
Cd 228.802†	912.3	0.02956	mg/L	0.000157	0.05912	mg/L	0.000314	0.53%
Co 228.616†	3563.1	0.09334	mg/L	0.000195	0.1867	mg/L	0.00039	0.21%
Cr 267.716†	2492.0	0.4263	mg/L	0.00327	0.8526	mg/L	0.00653	0.77%
Cu 324.752†	50362.7	0.2158	mg/L	0.00056	0.4316	mg/L	0.00113	0.26%
Fe 273.955†	232950.5	191.0	mg/L	1.52	382.1	mg/L	3.04	0.80%
K 766.490†	24794.0	13.25	mg/L	0.100	26.50	mg/L	0.201	0.76%
Mg 279.077†	91868.1	65.71	mg/L	0.487	131.4	mg/L	0.97	0.74%
Mn 257.610†	651458.5	19.22	mg/L	0.150	38.44	mg/L	0.301	0.78%
Mo 202.031†	139.0	0.00631	mg/L	0.000154	0.01262	mg/L	0.000307	2.44%
Na 589.592†	14646.4	1.225	mg/L	0.0076	2.450	mg/L	0.0152	0.62%
Na 330.237†	-10.7	0.6978	mg/L	0.23299	1.396	mg/L	0.4660	33.39%
Ni 231.604†	1011.5	0.2637	mg/L	0.00223	0.5273	mg/L	0.00446	0.84%
Pb 220.353†	9347.2	1.260	mg/L	0.0022	2.520	mg/L	0.0045	0.18%
Sb 206.836†	47.1	0.01325	mg/L	0.001411	0.02650	mg/L	0.002821	10.65%
Se 196.026†	27.1	0.01925	mg/L	0.001657	0.03850	mg/L	0.003313	8.61%
Si 288.158†	9781.1	4.838	mg/L	0.0344	9.676	mg/L	0.0688	0.71%
Sn 189.927†	-54.5	-0.00249	mg/L	0.001888	-0.00498	mg/L	0.003776	75.85%
Sr 421.552†	776403.0	0.8850	mg/L	0.00595	1.770	mg/L	0.0119	0.67%
Ti 334.903†	134018.9	6.875	mg/L	0.0536	13.75	mg/L	0.107	0.78%
Tl 190.801†	-26.6	0.00744	mg/L	0.002419	0.01488	mg/L	0.004839	32.51%
V 292.402†	41223.9	0.3321	mg/L	0.00158	0.6642	mg/L	0.00316	0.48%
Zn 206.200†	5445.8	1.439	mg/L	0.0054	2.878	mg/L	0.0108	0.38%

Sequence No.: 32
Sample ID: VR30 ASPK SWC

Autosampler Location: 329
Date Collected: 11/15/2012 11:57:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2619636.9	104.5	%	0.57				0.55%
ScR 361.383	337542.8	103.7	%	0.14				0.14%
Ag 328.068†	80516.1	0.4837	mg/L	0.00207	0.9674	mg/L	0.00414	0.43%
Al 308.215†	309779.0	183.4	mg/L	1.60	366.8	mg/L	3.20	0.87%
As 188.979†	3345.6	2.079	mg/L	0.0063	4.158	mg/L	0.0126	0.30%
B 249.677†	184.1	0.02389	mg/L	0.000976	0.04778	mg/L	0.001952	4.09%
Ba 233.527†	33092.4	7.766	mg/L	0.0106	15.53	mg/L	0.021	0.14%
Be 313.042†	309668.5	0.4896	mg/L	0.00637	0.9791	mg/L	0.01273	1.30%
Ca 317.933†	1408485.3	105.7	mg/L	1.27	211.5	mg/L	2.54	1.20%
Cd 228.802†	17521.9	0.5738	mg/L	0.00198	1.148	mg/L	0.0040	0.35%
Co 228.616†	20122.0	0.6028	mg/L	0.00258	1.206	mg/L	0.0052	0.43%
Cr 267.716†	5479.3	0.9372	mg/L	0.00840	1.874	mg/L	0.0168	0.90%
Cu 324.752†	179239.8	0.7515	mg/L	0.00165	1.503	mg/L	0.0033	0.22%
Fe 273.955†	232589.4	190.7	mg/L	1.87	381.5	mg/L	3.73	0.98%
K 766.490†	44237.3	23.64	mg/L	0.257	47.28	mg/L	0.513	1.08%
Mg 279.077†	104483.7	74.75	mg/L	0.661	149.5	mg/L	1.32	0.88%
Mn 257.610†	679619.3	20.05	mg/L	0.193	40.10	mg/L	0.386	0.96%
Mo 202.031†	141.9	0.00628	mg/L	0.000194	0.01257	mg/L	0.000388	3.08%
Na 589.592†	130840.6	10.94	mg/L	0.091	21.89	mg/L	0.183	0.84%
Na 330.237†	277.4	11.06	mg/L	0.286	22.13	mg/L	0.572	2.58%
Ni 231.604†	2804.5	0.7306	mg/L	0.00498	1.461	mg/L	0.0100	0.68%
Pb 220.353†	23650.2	3.136	mg/L	0.0135	6.271	mg/L	0.0271	0.43%
Sb 206.836†	2096.7	0.6699	mg/L	0.00601	1.340	mg/L	0.0120	0.90%
Se 196.026†	2817.1	2.022	mg/L	0.0081	4.045	mg/L	0.0162	0.40%
Si 288.158†	7388.9	3.660	mg/L	0.0119	7.319	mg/L	0.0237	0.32%
Sn 189.927†	-56.7	-0.00100	mg/L	0.000579	-0.00200	mg/L	0.001158	58.04%
Sr 421.552†	1227052.9	1.399	mg/L	0.0128	2.798	mg/L	0.0255	0.91%
Ti 334.903†	130182.4	6.677	mg/L	0.0601	13.35	mg/L	0.120	0.90%
Tl 190.801†	4333.4	1.818	mg/L	0.0109	3.636	mg/L	0.0219	0.60%
V 292.402†	100468.8	0.8201	mg/L	0.00345	1.640	mg/L	0.0069	0.42%
Zn 206.200†	7379.8	1.950	mg/L	0.0163	3.900	mg/L	0.0326	0.84%

Sequence No.: 33
Sample ID: ~~VR30 APOST SWC~~ ZZZZZZ
Dilution: 2.000000X BA 11/14/12

Autosampler Location: 330
Date Collected: 11/15/2012 12:01:12 PM
Data Type: Original

Nebulizer Parameters: VR30 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2594992.8	103.5	%	0.45				0.43%
ScR 361.383	335608.7	103.2	%	0.84				0.82%
Ag 328.068†	79832.1	0.4796	mg/L	0.02189	0.9592	mg/L	0.04377	4.56%
Al 308.215†	339836.4	201.2	mg/L	1.74	402.4	mg/L	3.48	0.86%
As 188.979†	3356.7	2.100	mg/L	0.0981	4.199	mg/L	0.1962	4.67%
B 249.677†	176.5	0.02284	mg/L	0.001826	0.04568	mg/L	0.003653	8.00%
Ba 233.527†	33674.2	7.900	mg/L	0.0635	15.80	mg/L	0.127	0.80%
Be 313.042†	284529.7	0.4498	mg/L	0.00789	0.8996	mg/L	0.01578	1.75%
Ca 317.933†	1454406.1	109.2	mg/L	0.98	218.4	mg/L	1.96	0.90%
Cd 228.802†	17478.4	0.5721	mg/L	0.02474	1.144	mg/L	0.0495	4.32%
Co 228.616†	20455.1	0.6118	mg/L	0.02334	1.224	mg/L	0.0467	3.82%
Cr 267.716†	5546.5	0.9480	mg/L	0.01217	1.896	mg/L	0.0243	1.28%
Cu 324.752†	186453.3	0.7822	mg/L	0.02174	1.564	mg/L	0.0435	2.78%
Fe 273.955†	256890.8	210.7	mg/L	1.88	421.3	mg/L	3.75	0.89%
K 766.490†	44265.7	23.66	mg/L	0.260	47.31	mg/L	0.520	1.10%
Mg 279.077†	125449.1	89.75	mg/L	0.805	179.5	mg/L	1.61	0.90%
Mn 257.610†	738942.0	21.80	mg/L	0.164	43.60	mg/L	0.328	0.75%
Mo 202.031†	144.2	0.00637	mg/L	0.000503	0.01274	mg/L	0.001006	7.90%
Na 589.592†	122091.7	10.21	mg/L	0.168	20.42	mg/L	0.337	1.65%
Na 330.237†	259.3	10.51	mg/L	0.410	21.03	mg/L	0.819	3.90%
Ni 231.604†	2835.0	0.7382	mg/L	0.00701	1.476	mg/L	0.0140	0.95%
Pb 220.353†	23574.5	3.129	mg/L	0.0793	6.258	mg/L	0.1586	2.53%
Sb 206.836†	56.9	0.01114	mg/L	0.002907	0.02229	mg/L	0.005814	26.09%
Se 196.026†	2836.4	2.036	mg/L	0.0913	4.072	mg/L	0.1825	4.48%
Si 288.158†	8808.8	4.363	mg/L	0.0737	8.725	mg/L	0.1474	1.69%
Sn 189.927†	-59.7	-0.00162	mg/L	0.003104	-0.00324	mg/L	0.006208	191.83%
Sr 421.552†	1230175.3	1.402	mg/L	0.0146	2.805	mg/L	0.0292	1.04%
Ti 334.903†	139875.0	7.175	mg/L	0.0565	14.35	mg/L	0.113	0.79%
Tl 190.801†	4317.5	1.813	mg/L	0.0810	3.627	mg/L	0.1620	4.47%
V 292.402†	106760.3	0.8711	mg/L	0.01874	1.742	mg/L	0.0375	2.15%
Zn 206.200†	7365.4	1.946	mg/L	0.0129	3.892	mg/L	0.0258	0.66%

Sequence No.: 34
Sample ID: VR30 MB1SPK SWC

Autosampler Location: 331
Date Collected: 11/15/2012 12:04:32 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2591653.2	103.3	%	0.21				0.20%
ScR 361.383	336919.3	103.6	%	0.95				0.92%
Ag 328.068†	84504.2	0.5076	mg/L	0.00109	1.015	mg/L	0.0022	0.21%
Al 308.215†	3536.8	2.086	mg/L	0.0287	4.173	mg/L	0.0574	1.38%
As 188.979†	3611.9	2.045	mg/L	0.0126	4.090	mg/L	0.0251	0.61%
B 249.677†	13.7	0.00078	mg/L	0.001114	0.00156	mg/L	0.002228	142.93%
Ba 233.527†	8873.2	2.090	mg/L	0.0313	4.181	mg/L	0.0627	1.50%
Be 313.042†	310560.1	0.4911	mg/L	0.00713	0.9822	mg/L	0.01426	1.45%
Ca 317.933†	134999.7	10.13	mg/L	0.117	20.27	mg/L	0.234	1.15%
Cd 228.802†	16561.6	0.5422	mg/L	0.00370	1.084	mg/L	0.0074	0.68%
Co 228.616†	17286.5	0.5314	mg/L	0.00170	1.063	mg/L	0.0034	0.32%
Cr 267.716†	3075.6	0.5260	mg/L	0.00748	1.052	mg/L	0.0150	1.42%
Cu 324.752†	127937.3	0.5319	mg/L	0.00068	1.064	mg/L	0.0014	0.13%
Fe 273.955†	2658.4	2.177	mg/L	0.0249	4.353	mg/L	0.0498	1.14%
K 766.490†	18472.9	9.873	mg/L	0.1513	19.75	mg/L	0.303	1.53%
Mg 279.077†	14623.8	10.48	mg/L	0.113	20.95	mg/L	0.227	1.08%
Mn 257.610†	17950.6	0.5299	mg/L	0.00578	1.060	mg/L	0.0116	1.09%
Mo 202.031†	29.2	0.00140	mg/L	0.000130	0.00280	mg/L	0.000261	9.30%
Na 589.592†	113998.7	9.535	mg/L	0.1122	19.07	mg/L	0.224	1.18%
Na 330.237†	278.3	10.05	mg/L	0.112	20.09	mg/L	0.224	1.11%
Ni 231.604†	1887.8	0.4924	mg/L	0.00534	0.9848	mg/L	0.01068	1.08%
Pb 220.353†	15026.0	1.969	mg/L	0.0080	3.939	mg/L	0.0161	0.41%
Sb 206.836†	6573.8	2.118	mg/L	0.0095	4.237	mg/L	0.0190	0.45%
Se 196.026†	2817.9	2.023	mg/L	0.0175	4.046	mg/L	0.0351	0.87%
Si 288.158†	-0.5	0.00305	mg/L	0.000706	0.00610	mg/L	0.001412	23.15%
Sn 189.927†	-24.7	-0.00443	mg/L	0.000104	-0.00887	mg/L	0.000208	2.35%
Sr 421.552†	427348.6	0.4871	mg/L	0.00608	0.9743	mg/L	0.01217	1.25%
Ti 334.903†	112.8	0.00520	mg/L	0.000158	0.01040	mg/L	0.000316	3.04%
Tl 190.801†	4745.2	1.971	mg/L	0.0080	3.942	mg/L	0.0161	0.41%
V 292.402†	63925.6	0.5262	mg/L	0.00197	1.052	mg/L	0.0039	0.37%
Zn 206.200†	2006.0	0.5301	mg/L	0.00719	1.060	mg/L	0.0144	1.36%

Sequence No.: 35
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 11/15/2012 12:08:34 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2584701.0	103.1	%	0.61				0.59%
ScR 361.383	325672.7	100.1	%	1.94				1.94%
Ag 328.068†	158666.8	0.9530	mg/L	0.00386	0.9530	mg/L	0.00386	0.41%
Al 308.215†	3503.9	2.040	mg/L	0.0403	2.040	mg/L	0.0403	1.98%
As 188.979†	3486.3	2.001	mg/L	0.0118	2.001	mg/L	0.0118	0.59%
B 249.677†	7163.0	0.9778	mg/L	0.01693	0.9778	mg/L	0.01693	1.73%
Ba 233.527†	4442.0	1.046	mg/L	0.0137	1.046	mg/L	0.0137	1.31%
Be 313.042†	617705.8	0.9768	mg/L	0.01227	0.9768	mg/L	0.01227	1.26%
Ca 317.933†	28220.9	2.119	mg/L	0.0316	2.119	mg/L	0.0316	1.49%
Cd 228.802†	31430.9	1.042	mg/L	0.0046	1.042	mg/L	0.0046	0.44%
Co 228.616†	34396.2	1.056	mg/L	0.0044	1.056	mg/L	0.0044	0.42%
Cr 267.716†	6131.2	1.050	mg/L	0.0177	1.050	mg/L	0.0177	1.68%
Cu 324.752†	242569.6	1.008	mg/L	0.0007	1.008	mg/L	0.0007	0.07%
Fe 273.955†	2606.1	2.130	mg/L	0.0421	2.130	mg/L	0.0421	1.97%
K 766.490†	37986.6	20.30	mg/L	0.317	20.30	mg/L	0.317	1.56%
Mg 279.077†	2910.9	2.092	mg/L	0.0303	2.092	mg/L	0.0303	1.45%
Mn 257.610†	36040.1	1.064	mg/L	0.0166	1.064	mg/L	0.0166	1.56%
Mo 202.031†	19460.9	1.026	mg/L	0.0035	1.026	mg/L	0.0035	0.34%
Na 589.592†	595455.6	49.80	mg/L	0.761	49.80	mg/L	0.761	1.53%
Na 330.237†	1422.1	52.12	mg/L	0.866	52.12	mg/L	0.866	1.66%
Ni 231.604†	3824.9	0.9973	mg/L	0.01634	0.9973	mg/L	0.01634	1.64%
Pb 220.353†	15159.6	1.987	mg/L	0.0086	1.987	mg/L	0.0086	0.43%
Sb 206.836†	6547.3	2.114	mg/L	0.0099	2.114	mg/L	0.0099	0.47%
Se 196.026†	2730.5	1.960	mg/L	0.0109	1.960	mg/L	0.0109	0.56%
Si 288.158†	4281.6	2.114	mg/L	0.0440	2.114	mg/L	0.0440	2.08%
Sn 189.927†	3775.8	1.030	mg/L	0.0036	1.030	mg/L	0.0036	0.35%
Sr 421.552†	859994.8	0.9803	mg/L	0.01513	0.9803	mg/L	0.01513	1.54%
Ti 334.903†	21156.9	1.085	mg/L	0.0172	1.085	mg/L	0.0172	1.58%
Tl 190.801†	4693.6	1.946	mg/L	0.0087	1.946	mg/L	0.0087	0.45%
V 292.402†	122982.3	1.013	mg/L	0.0025	1.013	mg/L	0.0025	0.25%
Zn 206.200†	3960.6	1.046	mg/L	0.0170	1.046	mg/L	0.0170	1.62%

Sequence No.: 36
Sample ID: CB S

Autosampler Location: 1
Date Collected: 11/15/2012 12:12:40 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589493.1	103.3	%	0.47				0.46%
ScR 361.383	335744.2	103.2	%	1.83				1.77%
Ag 328.068†	-6.4	-0.00004	mg/L	0.000061	-0.00004	mg/L	0.000061	159.74%
Al 308.215†	25.7	0.01518	mg/L	0.009667	0.01518	mg/L	0.009667	63.68%
As 188.979†	2.6	0.00153	mg/L	0.002633	0.00153	mg/L	0.002633	172.20%
B 249.677†	10.9	0.00149	mg/L	0.001118	0.00149	mg/L	0.001118	75.07%
Ba 233.527†	-1.5	-0.00036	mg/L	0.000574	-0.00036	mg/L	0.000574	161.20%
Be 313.042†	109.3	0.00017	mg/L	0.000065	0.00017	mg/L	0.000065	37.81%
Ca 317.933†	92.9	0.00697	mg/L	0.000212	0.00697	mg/L	0.000212	3.03%
Cd 228.802†	-2.1	-0.00008	mg/L	0.000035	-0.00008	mg/L	0.000035	42.49%
Co 228.616†	18.4	0.00056	mg/L	0.000123	0.00056	mg/L	0.000123	21.87%
Cr 267.716†	0.9	0.00016	mg/L	0.000772	0.00016	mg/L	0.000772	489.46%
Cu 324.752†	-86.2	-0.00036	mg/L	0.000087	-0.00036	mg/L	0.000087	24.22%
Fe 273.955†	18.8	0.01542	mg/L	0.002082	0.01542	mg/L	0.002082	13.50%
K 766.490†	-17.9	-0.00954	mg/L	0.019113	-0.00954	mg/L	0.019113	200.30%
Mg 279.077†	20.5	0.01470	mg/L	0.005154	0.01470	mg/L	0.005154	35.06%
Mn 257.610†	47.2	0.00139	mg/L	0.000163	0.00139	mg/L	0.000163	11.69%
Mo 202.031†	12.7	0.00067	mg/L	0.000139	0.00067	mg/L	0.000139	20.78%
Na 589.592†	-2.4	-0.00020	mg/L	0.002650	-0.00020	mg/L	0.002650	>999.9%
Na 330.237†	-0.1	-0.00374	mg/L	0.315563	-0.00374	mg/L	0.315563	>999.9%
Ni 231.604†	-4.0	-0.00104	mg/L	0.000470	-0.00104	mg/L	0.000470	45.12%
Pb 220.353†	5.0	0.00066	mg/L	0.000186	0.00066	mg/L	0.000186	28.23%
Sb 206.836†	12.7	0.00411	mg/L	0.000372	0.00411	mg/L	0.000372	9.05%
Se 196.026†	0.3	0.00020	mg/L	0.004763	0.00020	mg/L	0.004763	>999.9%
Si 288.158†	6.0	0.00296	mg/L	0.004552	0.00296	mg/L	0.004552	153.88%
Sn 189.927†	-1.2	-0.00031	mg/L	0.000198	-0.00031	mg/L	0.000198	63.01%
Sr 421.552†	230.8	0.00026	mg/L	0.000073	0.00026	mg/L	0.000073	27.59%
Ti 334.903†	34.5	0.00177	mg/L	0.001186	0.00177	mg/L	0.001186	66.98%
Tl 190.801†	0.9	0.00038	mg/L	0.001616	0.00038	mg/L	0.001616	424.18%
V 292.402†	4.9	0.00004	mg/L	0.000185	0.00004	mg/L	0.000185	463.22%
Zn 206.200†	2.3	0.00061	mg/L	0.000199	0.00061	mg/L	0.000199	32.87%

Analysis Begun

Start Time: 11/15/2012 12:52:22 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VR30 MB2 SWC
Autosampler Location: 332
Date Collected: 11/15/2012 12:52:23 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB2 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 MB2 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2617075.3	104.4	%	0.39				0.37%
ScR 361.383	333215.2	102.4	%	0.63				0.62%
Ag 328.068†	-48.0	-0.00029	mg/L	0.000270	-0.00058	mg/L	0.000540	93.56%
Al 308.215†	10.0	0.00594	mg/L	0.005524	0.01187	mg/L	0.011047	93.05%
As 188.979†	4.5	0.00255	mg/L	0.000880	0.00511	mg/L	0.001759	34.44%
B 249.677†	0.9	0.00013	mg/L	0.000683	0.00025	mg/L	0.001367	537.55%
Ba 233.527†	-4.5	-0.00107	mg/L	0.000187	-0.00214	mg/L	0.000373	17.44%
Be 313.042†	27.0	0.00004	mg/L	0.000014	0.00009	mg/L	0.000029	33.88%
Ca 317.933†	110.9	0.00833	mg/L	0.000971	0.01665	mg/L	0.001943	11.67%
Cd 228.802†	-8.2	-0.00029	mg/L	0.000134	-0.00058	mg/L	0.000268	45.96%
Co 228.616†	8.0	0.00024	mg/L	0.000103	0.00049	mg/L	0.000206	42.19%
Cr 267.716†	-2.2	-0.00037	mg/L	0.000739	-0.00074	mg/L	0.001477	199.19%
Cu 324.752†	-92.8	-0.00039	mg/L	0.000176	-0.00077	mg/L	0.000352	45.61%
Fe 273.955†	6.6	0.00538	mg/L	0.000751	0.01077	mg/L	0.001501	13.94%
K 766.490†	-27.1	-0.01448	mg/L	0.014965	-0.02897	mg/L	0.029931	103.33%
Mg 279.077†	7.1	0.00509	mg/L	0.004860	0.01019	mg/L	0.009721	95.44%
Mn 257.610†	8.7	0.00026	mg/L	0.000066	0.00051	mg/L	0.000131	25.64%
Mo 202.031†	-0.4	-0.00002	mg/L	0.000074	-0.00004	mg/L	0.000148	378.18%
Na 589.592†	-18.7	-0.00157	mg/L	0.002015	-0.00314	mg/L	0.004030	128.55%
Na 330.237†	1.1	0.04124	mg/L	0.200949	0.08248	mg/L	0.401898	487.25%
Ni 231.604†	-2.2	-0.00057	mg/L	0.000865	-0.00114	mg/L	0.001729	152.33%
Pb 220.353†	3.0	0.00039	mg/L	0.000490	0.00078	mg/L	0.000980	125.52%
Sb 206.836†	3.8	0.00122	mg/L	0.000670	0.00244	mg/L	0.001339	54.87%
Se 196.026†	0.5	0.00036	mg/L	0.000857	0.00073	mg/L	0.001714	235.87%
Si 288.158†	-0.2	-0.00010	mg/L	0.001771	-0.00021	mg/L	0.003543	>999.9%
Sn 189.927†	0.9	0.00025	mg/L	0.000457	0.00050	mg/L	0.000915	184.29%
Sr 421.552†	44.5	0.00005	mg/L	0.000037	0.00010	mg/L	0.000073	72.15%
Ti 334.903†	15.2	0.00078	mg/L	0.000557	0.00156	mg/L	0.001115	71.51%
Tl 190.801†	-3.4	-0.00140	mg/L	0.000522	-0.00281	mg/L	0.001045	37.21%
V 292.402†	-4.4	-0.00004	mg/L	0.000102	-0.00008	mg/L	0.000204	268.77%
Zn 206.200†	5.7	0.00150	mg/L	0.000634	0.00300	mg/L	0.001268	42.25%

Sequence No.: 2
Sample ID: VR30 E SWC

Dilution: 2.000000X

Del

Autosampler Location: 333
Date Collected: 11/15/2012 12:56:40 PM
Data Type: Original

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2660633.7	106.1	%	0.32				0.30%
ScR 361.383	341239.4	104.9	%	0.60				0.57%
Ag 328.068†	-554.3	-0.00319	mg/L	0.000022	-0.00638	mg/L	0.000044	0.68%
Al 308.215†	573454.4	339.5	mg/L	3.95	679.0	mg/L	7.90	1.16%
As 188.979†	-272.3	0.09715	mg/L	0.001040	0.1943	mg/L	0.00208	1.07%
B 249.677†	142.7	0.01924	mg/L	0.000974	0.03848	mg/L	0.001948	5.06%
Ba 233.527†	16268.3	3.787	mg/L	0.0418	7.574	mg/L	0.0836	1.10%
Be 313.042†	6374.6	0.00988	mg/L	0.000129	0.01976	mg/L	0.000258	1.31%
Ca 317.933†	521221.1	39.13	mg/L	0.655	78.26	mg/L	1.309	1.67%
Cd 228.802†	177.1	0.00448	mg/L	0.000160	0.00896	mg/L	0.000319	3.56%
Co 228.616†	4193.5	0.1078	mg/L	0.00073	0.2156	mg/L	0.00146	0.67%
Cr 267.716†	1715.6	0.2983	mg/L	0.00313	0.5966	mg/L	0.00626	1.05%
Cu 324.752†	62528.1	0.2700	mg/L	0.00079	0.5400	mg/L	0.00157	0.29%
Fe 273.955†	343839.2	282.0	mg/L	3.48	564.0	mg/L	6.97	1.24%
K 766.490†	26608.6	14.22	mg/L	0.138	28.44	mg/L	0.276	0.97%
Mg 279.077†	95420.0	68.20	mg/L	1.067	136.4	mg/L	2.13	1.56%
Mn 257.610†	149200.1	4.401	mg/L	0.0519	8.803	mg/L	0.1037	1.18%
Mo 202.031†	58.1	0.00262	mg/L	0.000495	0.00525	mg/L	0.000989	18.86%
Na 589.592†	28229.7	2.361	mg/L	0.0187	4.722	mg/L	0.0375	0.79%
Na 330.237†	1.4	1.742	mg/L	0.0780	3.485	mg/L	0.1560	4.48%
Ni 231.604†	975.5	0.2543	mg/L	0.00223	0.5086	mg/L	0.00446	0.88%
Pb 220.353†	966.8	0.1965	mg/L	0.00134	0.3930	mg/L	0.00268	0.68%
Sb 206.836†	22.9	0.00876	mg/L	0.001903	0.01752	mg/L	0.003805	21.72%
Se 196.026†	37.2	0.02642	mg/L	0.001630	0.05283	mg/L	0.003260	6.17%
Si 288.158†	3011.7	1.495	mg/L	0.0223	2.991	mg/L	0.0446	1.49%
Sn 189.927†	-45.6	-0.00631	mg/L	0.001353	-0.01261	mg/L	0.002706	21.45%
Sr 421.552†	388997.1	0.4434	mg/L	0.00438	0.8869	mg/L	0.00877	0.99%
Ti 334.903†	172854.7	8.871	mg/L	0.1058	17.74	mg/L	0.212	1.19%
Tl 190.801†	-69.9	-0.00138	mg/L	0.001171	-0.00275	mg/L	0.002342	85.08%
V 292.402†	57432.6	0.4578	mg/L	0.00137	0.9157	mg/L	0.00275	0.30%
Zn 206.200†	3762.7	0.9941	mg/L	0.01597	1.988	mg/L	0.0319	1.61%

Sequence No.: 3
Sample ID: VR30 F SWC

Autosampler Location: 334
Date Collected: 11/15/2012 1:00:42 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2679909.2	106.9	%	0.40				0.38%
ScR 361.383	341248.1	104.9	%	1.98				1.89%
Ag 328.068†	-322.0	-0.00181	mg/L	0.000233	-0.00361	mg/L	0.000467	12.91%
Al 308.215†	577534.1	341.9	mg/L	5.84	683.9	mg/L	11.68	1.71%
As 188.979†	-282.9	0.09554	mg/L	0.010099	0.1911	mg/L	0.02020	10.57%
B 249.677†	126.1	0.01697	mg/L	0.001478	0.03394	mg/L	0.002956	8.71%
Ba 233.527†	13742.6	3.193	mg/L	0.0435	6.387	mg/L	0.0870	1.36%
Be 313.042†	6349.8	0.00985	mg/L	0.000157	0.01969	mg/L	0.000313	1.59%
Ca 317.933†	475568.7	35.70	mg/L	0.754	71.41	mg/L	1.508	2.11%
Cd 228.802†	182.0	0.00477	mg/L	0.000092	0.00953	mg/L	0.000185	1.94%
Co 228.616†	4109.6	0.1051	mg/L	0.00120	0.2102	mg/L	0.00241	1.14%
Cr 267.716†	1705.1	0.2964	mg/L	0.00377	0.5927	mg/L	0.00754	1.27%
Cu 324.752†	68683.0	0.2952	mg/L	0.00127	0.5904	mg/L	0.00254	0.43%
Fe 273.955†	333668.6	273.6	mg/L	5.47	547.3	mg/L	10.95	2.00%
K 766.490†	26697.9	14.27	mg/L	0.235	28.54	mg/L	0.470	1.65%
Mg 279.077†	92023.1	65.77	mg/L	1.282	131.5	mg/L	2.56	1.95%
Mn 257.610†	176208.6	5.198	mg/L	0.1042	10.40	mg/L	0.208	2.00%
Mo 202.031†	58.4	0.00267	mg/L	0.000614	0.00535	mg/L	0.001229	22.97%
Na 589.592†	29001.1	2.426	mg/L	0.0422	4.851	mg/L	0.0843	1.74%
Na 330.237†	1.9	1.793	mg/L	0.4468	3.586	mg/L	0.8936	24.92%
Ni 231.604†	968.2	0.2524	mg/L	0.00322	0.5048	mg/L	0.00644	1.28%
Pb 220.353†	730.6	0.1664	mg/L	0.00174	0.3329	mg/L	0.00348	1.04%
Sb 206.836†	15.1	0.00619	mg/L	0.004980	0.01238	mg/L	0.009960	80.46%
Se 196.026†	44.2	0.03145	mg/L	0.003514	0.06291	mg/L	0.007028	11.17%
Si 288.158†	2711.1	1.347	mg/L	0.0203	2.693	mg/L	0.0406	1.51%
Sn 189.927†	-48.5	-0.00750	mg/L	0.001118	-0.01500	mg/L	0.002237	14.91%
Sr 421.552†	402799.2	0.4592	mg/L	0.00788	0.9183	mg/L	0.01576	1.72%
Ti 334.903†	175694.3	9.017	mg/L	0.1661	18.03	mg/L	0.332	1.84%
Tl 190.801†	-60.5	0.00176	mg/L	0.001649	0.00352	mg/L	0.003297	93.73%
V 292.402†	53515.8	0.4260	mg/L	0.00119	0.8521	mg/L	0.00238	0.28%
Zn 206.200†	3785.0	1.000	mg/L	0.0134	2.000	mg/L	0.0269	1.34%

Sequence No.: 4
Sample ID: VR30 G SWC

Autosampler Location: 335
Date Collected: 11/15/2012 1:04:45 PM
Data Type: Original

Dilution: 2.000000X

Del

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2707751.5	108.0	%	0.28				0.26%
ScR 361.383	345689.8	106.3	%	1.69				1.59%
Ag 328.068†	188.0	0.00127	mg/L	0.000121	0.00253	mg/L	0.000241	9.54%
Al 308.215†	617317.1	365.5	mg/L	6.55	731.0	mg/L	13.09	1.79%
As 188.979†	-300.2	0.1079	mg/L	0.00837	0.2158	mg/L	0.01673	7.75%
B 249.677†	126.0	0.01695	mg/L	0.000363	0.03390	mg/L	0.000726	2.14%
Ba 233.527†	12688.3	2.942	mg/L	0.0595	5.884	mg/L	0.1190	2.02%
Be 313.042†	6699.9	0.01038	mg/L	0.000189	0.02077	mg/L	0.000377	1.82%
Ca 317.933†	545631.1	40.96	mg/L	0.854	81.93	mg/L	1.707	2.08%
Cd 228.802†	144.8	0.00345	mg/L	0.000295	0.00691	mg/L	0.000590	8.54%
Co 228.616†	4199.7	0.1061	mg/L	0.00088	0.2123	mg/L	0.00177	0.83%
Cr 267.716†	2481.8	0.4295	mg/L	0.00888	0.8590	mg/L	0.01776	2.07%
Cu 324.752†	90542.3	0.3866	mg/L	0.00049	0.7733	mg/L	0.00097	0.13%
Fe 273.955†	356334.8	292.2	mg/L	5.75	584.5	mg/L	11.50	1.97%
K 766.490†	27867.6	14.89	mg/L	0.257	29.79	mg/L	0.513	1.72%
Mg 279.077†	103284.1	73.83	mg/L	1.430	147.7	mg/L	2.86	1.94%
Mn 257.610†	160869.9	4.746	mg/L	0.0934	9.491	mg/L	0.1868	1.97%
Mo 202.031†	66.8	0.00305	mg/L	0.000389	0.00611	mg/L	0.000778	12.74%
Na 589.592†	34362.6	2.874	mg/L	0.0546	5.748	mg/L	0.1092	1.90%
Na 330.237†	8.1	2.212	mg/L	0.1882	4.424	mg/L	0.3765	8.51%
Ni 231.604†	1170.2	0.3050	mg/L	0.00643	0.6101	mg/L	0.01286	2.11%
Pb 220.353†	902.5	0.1940	mg/L	0.00137	0.3879	mg/L	0.00274	0.71%
Sb 206.836†	10.9	0.00342	mg/L	0.001902	0.00683	mg/L	0.003804	55.69%
Se 196.026†	45.1	0.03204	mg/L	0.002848	0.06408	mg/L	0.005696	8.89%
Si 288.158†	2579.2	1.283	mg/L	0.0157	2.565	mg/L	0.0314	1.22%
Sn 189.927†	-50.8	-0.00736	mg/L	0.000899	-0.01471	mg/L	0.001799	12.23%
Sr 421.552†	468997.3	0.5346	mg/L	0.00930	1.069	mg/L	0.0186	1.74%
Ti 334.903†	191144.6	9.810	mg/L	0.1846	19.62	mg/L	0.369	1.88%
Tl 190.801†	-67.5	0.00063	mg/L	0.002311	0.00126	mg/L	0.004621	367.04%
V 292.402†	57970.4	0.4620	mg/L	0.00088	0.9239	mg/L	0.00177	0.19%
Zn 206.200†	3659.9	0.9669	mg/L	0.01814	1.934	mg/L	0.0363	1.88%

Sequence No.: 5
Sample ID: VR30 H SWC

Dilution: 2.000000X

Del

Autosampler Location: 336
Date Collected: 11/15/2012 1:08:47 PM
Data Type: Original

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2654240.0	105.8	%	0.22				0.21%
ScR 361.383	344085.2	105.8	%	1.01				0.96%
Ag 328.068†	-263.1	-0.00148	mg/L	0.000171	-0.00296	mg/L	0.000343	11.56%
Al 308.215†	429309.0	254.2	mg/L	4.79	508.4	mg/L	9.57	1.88%
As 188.979†	-171.5	0.09841	mg/L	0.004323	0.1968	mg/L	0.00865	4.39%
B 249.677†	124.1	0.01676	mg/L	0.000622	0.03351	mg/L	0.001244	3.71%
Ba 233.527†	19347.2	4.523	mg/L	0.0468	9.047	mg/L	0.0936	1.03%
Be 313.042†	4657.0	0.00721	mg/L	0.000091	0.01443	mg/L	0.000182	1.26%
Ca 317.933†	477468.4	35.85	mg/L	0.700	71.69	mg/L	1.400	1.95%
Cd 228.802†	361.5	0.01088	mg/L	0.000136	0.02177	mg/L	0.000272	1.25%
Co 228.616†	3158.3	0.08056	mg/L	0.000484	0.1611	mg/L	0.00097	0.60%
Cr 267.716†	1447.0	0.2517	mg/L	0.00189	0.5034	mg/L	0.00379	0.75%
Cu 324.752†	33581.9	0.1474	mg/L	0.00039	0.2949	mg/L	0.00077	0.26%
Fe 273.955†	264859.2	217.2	mg/L	3.77	434.4	mg/L	7.53	1.73%
K 766.490†	26733.7	14.29	mg/L	0.243	28.58	mg/L	0.486	1.70%
Mg 279.077†	58316.8	41.66	mg/L	0.776	83.32	mg/L	1.552	1.86%
Mn 257.610†	301755.4	8.902	mg/L	0.1530	17.80	mg/L	0.306	1.72%
Mo 202.031†	77.0	0.00366	mg/L	0.000191	0.00732	mg/L	0.000383	5.23%
Na 589.592†	22299.9	1.865	mg/L	0.0347	3.730	mg/L	0.0694	1.86%
Na 330.237†	13.7	1.630	mg/L	0.1935	3.260	mg/L	0.3870	11.87%
Ni 231.604†	842.5	0.2196	mg/L	0.00326	0.4392	mg/L	0.00653	1.49%
Pb 220.353†	2333.7	0.3579	mg/L	0.00244	0.7159	mg/L	0.00489	0.68%
Sb 206.836†	17.0	0.00617	mg/L	0.000321	0.01234	mg/L	0.000643	5.21%
Se 196.026†	29.6	0.02104	mg/L	0.006733	0.04208	mg/L	0.013467	32.00%
Si 288.158†	5362.5	2.653	mg/L	0.0154	5.306	mg/L	0.0307	0.58%
Sn 189.927†	-40.7	-0.00565	mg/L	0.000536	-0.01130	mg/L	0.001072	9.49%
Sr 421.552†	379374.1	0.4325	mg/L	0.00767	0.8649	mg/L	0.01533	1.77%
Ti 334.903†	134687.0	6.912	mg/L	0.1324	13.82	mg/L	0.265	1.92%
Tl 190.801†	-45.1	0.00265	mg/L	0.004043	0.00530	mg/L	0.008086	152.57%
V 292.402†	41558.2	0.3316	mg/L	0.00094	0.6631	mg/L	0.00187	0.28%
Zn 206.200†	5120.7	1.353	mg/L	0.0149	2.706	mg/L	0.0297	1.10%

Sequence No.: 6
Sample ID: VR30 I SWC

Autosampler Location: 337
Date Collected: 11/15/2012 1:12:49 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 I SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2638198.9	105.2	%	0.37				0.35%
ScR 361.383	340162.3	104.6	%	1.78				1.71%
Ag 328.068†	-490.0	-0.00284	mg/L	0.000096	-0.00569	mg/L	0.000191	3.36%
Al 308.215†	279358.0	165.4	mg/L	2.06	330.8	mg/L	4.12	1.24%
As 188.979†	-24.6	0.1622	mg/L	0.00419	0.3244	mg/L	0.00837	2.58%
B 249.677†	100.1	0.01348	mg/L	0.000740	0.02696	mg/L	0.001481	5.49%
Ba 233.527†	10635.7	2.473	mg/L	0.0234	4.946	mg/L	0.0467	0.94%
Be 313.042†	4315.4	0.00668	mg/L	0.000082	0.01336	mg/L	0.000164	1.22%
Ca 317.933†	617169.8	46.33	mg/L	0.537	92.67	mg/L	1.075	1.16%
Cd 228.802†	530.3	0.01609	mg/L	0.000148	0.03218	mg/L	0.000296	0.92%
Co 228.616†	3277.2	0.08585	mg/L	0.000885	0.1717	mg/L	0.00177	1.03%
Cr 267.716†	1307.0	0.2263	mg/L	0.00106	0.4525	mg/L	0.00212	0.47%
Cu 324.752†	40989.2	0.1776	mg/L	0.00067	0.3553	mg/L	0.00135	0.38%
Fe 273.955†	246718.0	202.3	mg/L	2.35	404.7	mg/L	4.70	1.16%
K 766.490†	20237.0	10.82	mg/L	0.181	21.63	mg/L	0.362	1.67%
Mg 279.077†	67774.2	48.44	mg/L	0.601	96.88	mg/L	1.202	1.24%
Mn 257.610†	361486.4	10.66	mg/L	0.125	21.33	mg/L	0.250	1.17%
Mo 202.031†	110.0	0.00528	mg/L	0.000522	0.01057	mg/L	0.001043	9.87%
Na 589.592†	11295.0	0.9447	mg/L	0.00929	1.889	mg/L	0.0186	0.98%
Na 330.237†	-14.2	0.5052	mg/L	0.13090	1.010	mg/L	0.2618	25.91%
Ni 231.604†	677.2	0.1765	mg/L	0.00302	0.3531	mg/L	0.00604	1.71%
Pb 220.353†	4457.1	0.6154	mg/L	0.00232	1.231	mg/L	0.0046	0.38%
Sb 206.836†	22.9	0.00815	mg/L	0.001462	0.01630	mg/L	0.002924	17.94%
Se 196.026†	18.4	0.01298	mg/L	0.005896	0.02597	mg/L	0.011791	45.41%
Si 288.158†	5593.1	2.768	mg/L	0.0296	5.536	mg/L	0.0592	1.07%
Sn 189.927†	-48.4	-0.00654	mg/L	0.000554	-0.01308	mg/L	0.001107	8.47%
Sr 421.552†	517145.2	0.5895	mg/L	0.00751	1.179	mg/L	0.0150	1.27%
Ti 334.903†	121886.0	6.254	mg/L	0.0757	12.51	mg/L	0.151	1.21%
Tl 190.801†	-44.1	0.00147	mg/L	0.000333	0.00295	mg/L	0.000665	22.57%
V 292.402†	41930.6	0.3357	mg/L	0.00109	0.6714	mg/L	0.00218	0.32%
Zn 206.200†	4542.8	1.200	mg/L	0.0122	2.401	mg/L	0.0245	1.02%

Sequence No.: 7
Sample ID: VR30 J SWC

Autosampler Location: 338
Date Collected: 11/15/2012 1:16:36 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631611.4	104.9	%	0.38				0.36%
ScR 361.383	337645.3	103.8	%	0.69				0.67%
Ag 328.068†	-326.5	-0.00185	mg/L	0.000135	-0.00371	mg/L	0.000270	7.28%
Al 308.215†	348635.3	206.4	mg/L	2.40	412.8	mg/L	4.79	1.16%
As 188.979†	16.4	0.2290	mg/L	0.00577	0.4579	mg/L	0.01154	2.52%
B 249.677†	93.9	0.01261	mg/L	0.001599	0.02522	mg/L	0.003197	12.68%
Ba 233.527†	11269.5	2.619	mg/L	0.0188	5.237	mg/L	0.0376	0.72%
Be 313.042†	4298.5	0.00663	mg/L	0.000060	0.01326	mg/L	0.000120	0.90%
Ca 317.933†	414621.2	31.13	mg/L	0.306	62.25	mg/L	0.611	0.98%
Cd 228.802†	536.0	0.01596	mg/L	0.000205	0.03192	mg/L	0.000409	1.28%
Co 228.616†	3654.4	0.09425	mg/L	0.000365	0.1885	mg/L	0.00073	0.39%
Cr 267.716†	1645.3	0.2846	mg/L	0.00223	0.5692	mg/L	0.00447	0.79%
Cu 324.752†	41679.9	0.1812	mg/L	0.00128	0.3624	mg/L	0.00255	0.70%
Fe 273.955†	274917.8	225.5	mg/L	2.76	450.9	mg/L	5.53	1.23%
K 766.490†	20512.0	10.96	mg/L	0.089	21.92	mg/L	0.177	0.81%
Mg 279.077†	70566.0	50.43	mg/L	0.517	100.9	mg/L	1.03	1.02%
Mn 257.610†	568383.0	16.77	mg/L	0.191	33.54	mg/L	0.382	1.14%
Mo 202.031†	102.1	0.00503	mg/L	0.000337	0.01005	mg/L	0.000674	6.71%
Na 589.592†	19300.4	1.614	mg/L	0.0129	3.229	mg/L	0.0257	0.80%
Na 330.237†	-12.7	0.8629	mg/L	0.09781	1.726	mg/L	0.1956	11.34%
Ni 231.604†	890.7	0.2322	mg/L	0.00298	0.4644	mg/L	0.00596	1.28%
Pb 220.353†	5390.9	0.7467	mg/L	0.00163	1.493	mg/L	0.0033	0.22%
Sb 206.836†	33.1	0.01135	mg/L	0.001621	0.02270	mg/L	0.003241	14.28%
Se 196.026†	28.7	0.02035	mg/L	0.006621	0.04070	mg/L	0.013242	32.53%
Si 288.158†	3860.3	1.912	mg/L	0.0159	3.825	mg/L	0.0318	0.83%
Sn 189.927†	-42.7	-0.00665	mg/L	0.001903	-0.01330	mg/L	0.003806	28.62%
Sr 421.552†	297277.9	0.3389	mg/L	0.00327	0.6778	mg/L	0.00654	0.96%
Ti 334.903†	150957.3	7.747	mg/L	0.0913	15.49	mg/L	0.183	1.18%
Tl 190.801†	-46.4	0.00278	mg/L	0.002061	0.00557	mg/L	0.004121	74.00%
V 292.402†	44886.7	0.3594	mg/L	0.00245	0.7189	mg/L	0.00491	0.68%
Zn 206.200†	4988.4	1.318	mg/L	0.0085	2.636	mg/L	0.0170	0.65%

Sequence No.: 8
Sample ID: VR30 K SWC

Autosampler Location: 339
Date Collected: 11/15/2012 1:20:38 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2624190.2	104.6	%	0.24				0.23%
ScR 361.383	335985.6	103.3	%	1.18				1.14%
Ag 328.068†	-320.1	-0.00183	mg/L	0.000137	-0.00366	mg/L	0.000275	7.52%
Al 308.215†	338454.5	200.4	mg/L	2.10	400.8	mg/L	4.20	1.05%
As 188.979†	-177.1	0.1384	mg/L	0.00381	0.2768	mg/L	0.00763	2.76%
B 249.677†	154.6	0.02094	mg/L	0.001201	0.04188	mg/L	0.002402	5.73%
Ba 233.527†	9345.9	2.170	mg/L	0.0148	4.339	mg/L	0.0296	0.68%
Be 313.042†	4512.2	0.00697	mg/L	0.000062	0.01394	mg/L	0.000123	0.88%
Ca 317.933†	732114.1	54.96	mg/L	0.634	109.9	mg/L	1.27	1.15%
Cd 228.802†	548.4	0.01732	mg/L	0.000206	0.03464	mg/L	0.000411	1.19%
Co 228.616†	3049.5	0.07465	mg/L	0.000350	0.1493	mg/L	0.00070	0.47%
Cr 267.716†	1403.9	0.2432	mg/L	0.00236	0.4865	mg/L	0.00471	0.97%
Cu 324.752†	36060.2	0.1566	mg/L	0.00035	0.3132	mg/L	0.00071	0.23%
Fe 273.955†	242851.0	199.2	mg/L	2.40	398.3	mg/L	4.79	1.20%
K 766.490†	22034.4	11.78	mg/L	0.095	23.55	mg/L	0.190	0.81%
Mg 279.077†	58661.6	41.92	mg/L	0.459	83.83	mg/L	0.919	1.10%
Mn 257.610†	363923.2	10.74	mg/L	0.121	21.47	mg/L	0.242	1.12%
Mo 202.031†	135.7	0.00655	mg/L	0.000274	0.01309	mg/L	0.000549	4.19%
Na 589.592†	23060.6	1.929	mg/L	0.0171	3.858	mg/L	0.0343	0.89%
Na 330.237†	-9.6	1.057	mg/L	0.2551	2.115	mg/L	0.5102	24.12%
Ni 231.604†	750.4	0.1956	mg/L	0.00167	0.3912	mg/L	0.00334	0.85%
Pb 220.353†	4422.8	0.6195	mg/L	0.00106	1.239	mg/L	0.0021	0.17%
Sb 206.836†	19.2	0.00757	mg/L	0.002306	0.01513	mg/L	0.004613	30.48%
Se 196.026†	13.0	0.00908	mg/L	0.008287	0.01816	mg/L	0.016574	91.26%
Si 288.158†	4943.3	2.446	mg/L	0.0129	4.892	mg/L	0.0257	0.53%
Sn 189.927†	-51.9	-0.00609	mg/L	0.002353	-0.01219	mg/L	0.004705	38.61%
Sr 421.552†	1032142.7	1.177	mg/L	0.0113	2.353	mg/L	0.0226	0.96%
Ti 334.903†	164824.5	8.458	mg/L	0.0845	16.92	mg/L	0.169	1.00%
Tl 190.801†	-38.6	0.00351	mg/L	0.005796	0.00701	mg/L	0.011592	165.35%
V 292.402†	39529.4	0.3149	mg/L	0.00154	0.6299	mg/L	0.00307	0.49%
Zn 206.200†	5912.4	1.562	mg/L	0.0154	3.124	mg/L	0.0308	0.99%

Sequence No.: 9
Sample ID: VR30 L SWC

Autosampler Location: 340
Date Collected: 11/15/2012 1:24:27 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2606762.5	103.9	%	0.21				0.20%
ScR 361.383	333057.4	102.4	%	0.64				0.62%
Ag 328.068†	-485.5	-0.00283	mg/L	0.000126	-0.00567	mg/L	0.000253	4.46%
Al 308.215†	283268.8	167.7	mg/L	0.59	335.4	mg/L	1.17	0.35%
As 188.979†	-100.3	0.1199	mg/L	0.00287	0.2398	mg/L	0.00573	2.39%
B 249.677†	170.8	0.02319	mg/L	0.001771	0.04637	mg/L	0.003541	7.64%
Ba 233.527†	17335.6	4.056	mg/L	0.0257	8.112	mg/L	0.0514	0.63%
Be 313.042†	4292.3	0.00666	mg/L	0.000019	0.01331	mg/L	0.000037	0.28%
Ca 317.933†	715141.1	53.69	mg/L	0.160	107.4	mg/L	0.32	0.30%
Cd 228.802†	625.0	0.01978	mg/L	0.000282	0.03956	mg/L	0.000563	1.42%
Co 228.616†	2526.8	0.06294	mg/L	0.000904	0.1259	mg/L	0.00181	1.44%
Cr 267.716†	1048.1	0.1815	mg/L	0.00035	0.3630	mg/L	0.00071	0.20%
Cu 324.752†	32174.3	0.1399	mg/L	0.00213	0.2798	mg/L	0.00426	1.52%
Fe 273.955†	213541.6	175.1	mg/L	0.20	350.3	mg/L	0.40	0.11%
K 766.490†	22267.0	11.90	mg/L	0.084	23.80	mg/L	0.169	0.71%
Mg 279.077†	52178.4	37.28	mg/L	0.091	74.57	mg/L	0.183	0.25%
Mn 257.610†	458300.9	13.52	mg/L	0.023	27.04	mg/L	0.047	0.17%
Mo 202.031†	85.9	0.00394	mg/L	0.000129	0.00787	mg/L	0.000258	3.28%
Na 589.592†	12112.8	1.013	mg/L	0.0085	2.026	mg/L	0.0170	0.84%
Na 330.237†	-17.4	0.3020	mg/L	0.31362	0.6039	mg/L	0.62724	103.86%
Ni 231.604†	528.1	0.1377	mg/L	0.00059	0.2753	mg/L	0.00117	0.43%
Pb 220.353†	5664.5	0.7753	mg/L	0.01055	1.551	mg/L	0.0211	1.36%
Sb 206.836†	21.4	0.00808	mg/L	0.001734	0.01617	mg/L	0.003468	21.45%
Se 196.026†	14.7	0.01038	mg/L	0.005925	0.02076	mg/L	0.011849	57.08%
Si 288.158†	5857.0	2.897	mg/L	0.0168	5.793	mg/L	0.0336	0.58%
Sn 189.927†	-47.1	-0.00525	mg/L	0.001717	-0.01051	mg/L	0.003435	32.69%
Sr 421.552†	938634.2	1.070	mg/L	0.0044	2.140	mg/L	0.0089	0.41%
Ti 334.903†	122552.8	6.288	mg/L	0.0193	12.58	mg/L	0.039	0.31%
Tl 190.801†	-30.9	0.00436	mg/L	0.001849	0.00872	mg/L	0.003698	42.40%
V 292.402†	35051.8	0.2805	mg/L	0.00374	0.5609	mg/L	0.00749	1.34%
Zn 206.200†	5646.0	1.492	mg/L	0.0055	2.983	mg/L	0.0111	0.37%

Sequence No.: 10
Sample ID: VR30 MB2SPK SWC

Autosampler Location: 341
Date Collected: 11/15/2012 1:28:31 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR30 MB2SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 MB2SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2583393.3	103.0	%	0.38				0.37%
ScR 361.383	336669.0	103.5	%	0.88				0.85%
Ag 328.068†	83511.5	0.5016	mg/L	0.00343	1.003	mg/L	0.0069	0.68%
Al 308.215†	3470.2	2.047	mg/L	0.0096	4.094	mg/L	0.0191	0.47%
As 188.979†	3546.0	2.008	mg/L	0.0017	4.016	mg/L	0.0033	0.08%
B 249.677†	10.4	0.00035	mg/L	0.000856	0.00069	mg/L	0.001713	247.26%
Ba 233.527†	8737.5	2.058	mg/L	0.0179	4.117	mg/L	0.0357	0.87%
Be 313.042†	307168.8	0.4857	mg/L	0.00280	0.9715	mg/L	0.00561	0.58%
Ca 317.933†	132573.8	9.953	mg/L	0.0351	19.91	mg/L	0.070	0.35%
Cd 228.802†	16391.6	0.5367	mg/L	0.00317	1.073	mg/L	0.0063	0.59%
Co 228.616†	17042.8	0.5239	mg/L	0.00190	1.048	mg/L	0.0038	0.36%
Cr 267.716†	3036.8	0.5194	mg/L	0.00464	1.039	mg/L	0.0093	0.89%
Cu 324.752†	126197.6	0.5246	mg/L	0.00393	1.049	mg/L	0.0079	0.75%
Fe 273.955†	2629.2	2.153	mg/L	0.0171	4.305	mg/L	0.0343	0.80%
K 766.490†	18261.5	9.760	mg/L	0.0523	19.52	mg/L	0.105	0.54%
Mg 279.077†	14420.4	10.33	mg/L	0.087	20.66	mg/L	0.173	0.84%
Mn 257.610†	17707.8	0.5227	mg/L	0.00415	1.045	mg/L	0.0083	0.79%
Mo 202.031†	22.8	0.00107	mg/L	0.000127	0.00213	mg/L	0.000253	11.89%
Na 589.592†	112844.4	9.438	mg/L	0.0445	18.88	mg/L	0.089	0.47%
Na 330.237†	274.2	9.907	mg/L	0.1316	19.81	mg/L	0.263	1.33%
Ni 231.604†	1880.4	0.4893	mg/L	0.00366	0.9786	mg/L	0.00731	0.75%
Pb 220.353†	14832.5	1.944	mg/L	0.0078	3.888	mg/L	0.0156	0.40%
Sb 206.836†	20.5	0.00115	mg/L	0.001922	0.00230	mg/L	0.003844	166.88%
Se 196.026†	2779.3	1.996	mg/L	0.0019	3.991	mg/L	0.0038	0.10%
Si 288.158†	-2.0	0.00226	mg/L	0.001568	0.00452	mg/L	0.003135	69.41%
Sn 189.927†	-18.7	-0.00378	mg/L	0.000321	-0.00757	mg/L	0.000642	8.48%
Sr 421.552†	422301.0	0.4814	mg/L	0.00243	0.9628	mg/L	0.00487	0.51%
Ti 334.903†	115.0	0.00532	mg/L	0.000447	0.01064	mg/L	0.000895	8.41%
Tl 190.801†	4669.5	1.940	mg/L	0.0062	3.879	mg/L	0.0123	0.32%
V 292.402†	62904.7	0.5178	mg/L	0.00375	1.036	mg/L	0.0075	0.72%
Zn 206.200†	1894.2	0.5005	mg/L	0.00393	1.001	mg/L	0.0079	0.79%

Sequence No.: 11
Sample ID: CV b

Autosampler Location: 7
Date Collected: 11/15/2012 1:32:33 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2568214.2	102.4	%	0.43				0.42%
ScR 361.383	330364.6	101.5	%	1.15				1.14%
Ag 328.068†	167191.7	1.004	mg/L	0.0020	1.004	mg/L	0.0020	0.20%
Al 308.215†	3489.0	2.031	mg/L	0.0203	2.031	mg/L	0.0203	1.00%
As 188.979†	3578.1	2.053	mg/L	0.0085	2.053	mg/L	0.0085	0.41%
B 249.677†	7088.0	0.9676	mg/L	0.01032	0.9676	mg/L	0.01032	1.07%
Ba 233.527†	4376.5	1.031	mg/L	0.0116	1.031	mg/L	0.0116	1.12%
Be 313.042†	612954.1	0.9693	mg/L	0.01102	0.9693	mg/L	0.01102	1.14%
Ca 317.933†	27974.9	2.100	mg/L	0.0163	2.100	mg/L	0.0163	0.77%
Cd 228.802†	32402.1	1.074	mg/L	0.0009	1.074	mg/L	0.0009	0.08%
Co 228.616†	34128.0	1.048	mg/L	0.0018	1.048	mg/L	0.0018	0.17%
Cr 267.716†	6078.9	1.041	mg/L	0.0072	1.041	mg/L	0.0072	0.69%
Cu 324.752†	243690.7	1.013	mg/L	0.0016	1.013	mg/L	0.0016	0.16%
Fe 273.955†	2625.0	2.145	mg/L	0.0246	2.145	mg/L	0.0246	1.15%
K 766.490†	37838.9	20.22	mg/L	0.288	20.22	mg/L	0.288	1.43%
Mg 279.077†	2853.9	2.052	mg/L	0.0316	2.052	mg/L	0.0316	1.54%
Mn 257.610†	36006.8	1.063	mg/L	0.0068	1.063	mg/L	0.0068	0.64%
Mo 202.031†	19324.7	1.018	mg/L	0.0039	1.018	mg/L	0.0039	0.38%
Na 589.592†	592922.5	49.59	mg/L	0.535	49.59	mg/L	0.535	1.08%
Na 330.237†	1413.3	51.80	mg/L	0.184	51.80	mg/L	0.184	0.35%
Ni 231.604†	3776.6	0.9847	mg/L	0.00641	0.9847	mg/L	0.00641	0.65%
Pb 220.353†	15039.9	1.972	mg/L	0.0082	1.972	mg/L	0.0082	0.42%
Sb 206.836†	6686.3	2.160	mg/L	0.0099	2.160	mg/L	0.0099	0.46%
Se 196.026†	2805.9	2.014	mg/L	0.0067	2.014	mg/L	0.0067	0.33%
Si 288.158†	4264.8	2.105	mg/L	0.0211	2.105	mg/L	0.0211	1.00%
Sn 189.927†	3870.2	1.056	mg/L	0.0046	1.056	mg/L	0.0046	0.44%
Sr 421.552†	855229.7	0.9749	mg/L	0.01118	0.9749	mg/L	0.01118	1.15%
Ti 334.903†	21023.2	1.078	mg/L	0.0087	1.078	mg/L	0.0087	0.81%
Tl 190.801†	4782.3	1.983	mg/L	0.0100	1.983	mg/L	0.0100	0.51%
V 292.402†	128218.6	1.055	mg/L	0.0010	1.055	mg/L	0.0010	0.10%
Zn 206.200†	3915.9	1.034	mg/L	0.0129	1.034	mg/L	0.0129	1.25%

Sequence No.: 12
Sample ID: CB 6
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 1:36:54 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2559851.2	102.1	%	0.56				0.54%
ScR 361.383	333599.9	102.5	%	0.86				0.84%
Ag 328.068†	-22.5	-0.00014	mg/L	0.000084	-0.00014	mg/L	0.000084	61.98%
Al 308.215†	1.2	0.00071	mg/L	0.005357	0.00071	mg/L	0.005357	749.47%
As 188.979†	-0.8	-0.00042	mg/L	0.001684	-0.00042	mg/L	0.001684	400.52%
B 249.677†	6.7	0.00092	mg/L	0.000358	0.00092	mg/L	0.000358	39.01%
Ba 233.527†	0.8	0.00018	mg/L	0.000570	0.00018	mg/L	0.000570	312.08%
Be 313.042†	99.1	0.00016	mg/L	0.000027	0.00016	mg/L	0.000027	17.48%
Ca 317.933†	6.3	0.00048	mg/L	0.001459	0.00048	mg/L	0.001459	306.18%
Cd 228.802†	-1.0	-0.00003	mg/L	0.000215	-0.00003	mg/L	0.000215	711.64%
Co 228.616†	15.7	0.00048	mg/L	0.000285	0.00048	mg/L	0.000285	59.37%
Cr 267.716†	0.8	0.00014	mg/L	0.000993	0.00014	mg/L	0.000993	719.36%
Cu 324.752†	-97.7	-0.00041	mg/L	0.000137	-0.00041	mg/L	0.000137	33.62%
Fe 273.955†	7.3	0.00597	mg/L	0.000820	0.00597	mg/L	0.000820	13.75%
K 766.490†	-40.9	-0.02185	mg/L	0.016225	-0.02185	mg/L	0.016225	74.25%
Mg 279.077†	5.7	0.00411	mg/L	0.004749	0.00411	mg/L	0.004749	115.68%
Mn 257.610†	12.9	0.00038	mg/L	0.000082	0.00038	mg/L	0.000082	21.47%
Mo 202.031†	11.5	0.00061	mg/L	0.000402	0.00061	mg/L	0.000402	66.29%
Na 589.592†	12.5	0.00105	mg/L	0.004040	0.00105	mg/L	0.004040	385.71%
Na 330.237†	0.1	0.00490	mg/L	0.321088	0.00490	mg/L	0.321088	>999.9%
Ni 231.604†	-4.1	-0.00107	mg/L	0.001648	-0.00107	mg/L	0.001648	154.70%
Pb 220.353†	3.3	0.00044	mg/L	0.000581	0.00044	mg/L	0.000581	132.99%
Sb 206.836†	11.1	0.00358	mg/L	0.000717	0.00358	mg/L	0.000717	20.05%
Se 196.026†	-1.7	-0.00121	mg/L	0.003038	-0.00121	mg/L	0.003038	250.21%
Si 288.158†	0.9	0.00047	mg/L	0.005094	0.00047	mg/L	0.005094	>999.9%
Sn 189.927†	-0.7	-0.00018	mg/L	0.000316	-0.00018	mg/L	0.000316	172.37%
Sr 421.552†	171.4	0.00020	mg/L	0.000040	0.00020	mg/L	0.000040	20.48%
Ti 334.903†	17.3	0.00089	mg/L	0.000925	0.00089	mg/L	0.000925	104.35%
Tl 190.801†	1.9	0.00078	mg/L	0.001745	0.00078	mg/L	0.001745	223.06%
V 292.402†	1.6	0.00001	mg/L	0.000107	0.00001	mg/L	0.000107	815.37%
Zn 206.200†	1.6	0.00043	mg/L	0.000390	0.00043	mg/L	0.000390	91.07%

Sequence No.: 13
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/15/2012 1:41:10 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2589421.5	103.3	%	0.22				0.21%
ScR 361.383	332059.3	102.1	%	0.88				0.86%
Ag 328.068†	460.3	0.00276	mg/L	0.000153	0.00276	mg/L	0.000153	5.52%
Al 308.215†	86.2	0.05087	mg/L	0.004687	0.05087	mg/L	0.004687	9.21%
As 188.979†	90.0	0.05111	mg/L	0.000978	0.05111	mg/L	0.000978	1.91%
B 249.677†	143.5	0.01961	mg/L	0.000560	0.01961	mg/L	0.000560	2.86%
Ba 233.527†	8.2	0.00191	mg/L	0.000542	0.00191	mg/L	0.000542	28.32%
Be 313.042†	665.9	0.00105	mg/L	0.000061	0.00105	mg/L	0.000061	5.81%
Ca 317.933†	669.2	0.05024	mg/L	0.001760	0.05024	mg/L	0.001760	3.50%
Cd 228.802†	65.2	0.00186	mg/L	0.000198	0.00186	mg/L	0.000198	10.67%
Co 228.616†	126.4	0.00387	mg/L	0.000154	0.00387	mg/L	0.000154	3.98%
Cr 267.716†	27.9	0.00478	mg/L	0.000520	0.00478	mg/L	0.000520	10.87%
Cu 324.752†	352.9	0.00147	mg/L	0.000034	0.00147	mg/L	0.000034	2.32%
Fe 273.955†	70.6	0.05787	mg/L	0.002137	0.05787	mg/L	0.002137	3.69%
K 766.490†	935.4	0.4999	mg/L	0.01029	0.4999	mg/L	0.01029	2.06%
Mg 279.077†	75.4	0.05400	mg/L	0.010253	0.05400	mg/L	0.010253	18.99%
Mn 257.610†	41.9	0.00124	mg/L	0.000110	0.00124	mg/L	0.000110	8.89%
Mo 202.031†	103.4	0.00545	mg/L	0.000151	0.00545	mg/L	0.000151	2.77%
Na 589.592†	5617.5	0.4698	mg/L	0.00460	0.4698	mg/L	0.00460	0.98%
Na 330.237†	8.8	0.3202	mg/L	0.09222	0.3202	mg/L	0.09222	28.80%
Ni 231.604†	36.5	0.00952	mg/L	0.001086	0.00952	mg/L	0.001086	11.40%
Pb 220.353†	160.5	0.02105	mg/L	0.000642	0.02105	mg/L	0.000642	3.05%
Sb 206.836†	167.0	0.05401	mg/L	0.000723	0.05401	mg/L	0.000723	1.34%
Se 196.026†	63.2	0.04536	mg/L	0.005217	0.04536	mg/L	0.005217	11.50%
Si 288.158†	130.1	0.06421	mg/L	0.004602	0.06421	mg/L	0.004602	7.17%
Sn 189.927†	39.1	0.01069	mg/L	0.000570	0.01069	mg/L	0.000570	5.33%
Sr 421.552†	930.0	0.00106	mg/L	0.000054	0.00106	mg/L	0.000054	5.09%
Ti 334.903†	106.5	0.00546	mg/L	0.000262	0.00546	mg/L	0.000262	4.80%
Tl 190.801†	113.4	0.04721	mg/L	0.000782	0.04721	mg/L	0.000782	1.66%
V 292.402†	377.4	0.00311	mg/L	0.000141	0.00311	mg/L	0.000141	4.54%
Zn 206.200†	40.1	0.01060	mg/L	0.000413	0.01060	mg/L	0.000413	3.90%

Sequence No.: 14
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/15/2012 1:45:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2541872.1	101.4	%	0.85				0.84%
ScR 361.383	327819.7	100.8	%	1.36				1.35%
Ag 328.068†	-218.5	-0.00131	mg/L	0.000086	-0.00131	mg/L	0.000086	6.59%
Al 308.215†	331855.8	196.5	mg/L	2.07	196.5	mg/L	2.07	1.06%
As 188.979†	38.2	0.01603	mg/L	0.000360	0.01603	mg/L	0.000360	2.25%
B 249.677†	-17.8	-0.00244	mg/L	0.000907	-0.00244	mg/L	0.000907	37.18%
Ba 233.527†	134.8	-0.00094	mg/L	0.000659	-0.00094	mg/L	0.000659	70.09%
Be 313.042†	67.4	0.00010	mg/L	0.000009	0.00010	mg/L	0.000009	8.92%
Ca 317.933†	1331561.5	99.97	mg/L	1.198	99.97	mg/L	1.198	1.20%
Cd 228.802†	54.7	-0.00021	mg/L	0.000171	-0.00021	mg/L	0.000171	80.69%
Co 228.616†	83.5	-0.00005	mg/L	0.000284	-0.00005	mg/L	0.000284	625.91%
Cr 267.716†	8.7	-0.00059	mg/L	0.000734	-0.00059	mg/L	0.000734	123.93%
Cu 324.752†	-2101.7	-0.00078	mg/L	0.000237	-0.00078	mg/L	0.000237	30.29%
Fe 273.955†	243579.2	199.8	mg/L	2.36	199.8	mg/L	2.36	1.18%
K 766.490†	-7.0	-0.00373	mg/L	0.016706	-0.00373	mg/L	0.016706	447.37%
Mg 279.077†	145578.0	104.2	mg/L	1.92	104.2	mg/L	1.92	1.85%
Mn 257.610†	28.2	0.00084	mg/L	0.000426	0.00084	mg/L	0.000426	50.75%
Mo 202.031†	43.6	0.00122	mg/L	0.000227	0.00122	mg/L	0.000227	18.67%
Na 589.592†	72.4	0.00605	mg/L	0.002643	0.00605	mg/L	0.002643	43.66%
Na 330.237†	-0.4	-0.01288	mg/L	0.248403	-0.01288	mg/L	0.248403	>999.9%
Ni 231.604†	-4.7	-0.00121	mg/L	0.001180	-0.00121	mg/L	0.001180	97.77%
Pb 220.353†	-284.9	0.00148	mg/L	0.001402	0.00148	mg/L	0.001402	95.01%
Sb 206.836†	17.4	0.00548	mg/L	0.002891	0.00548	mg/L	0.002891	52.71%
Se 196.026†	21.3	0.01528	mg/L	0.005772	0.01528	mg/L	0.005772	37.76%
Si 288.158†	-35.7	-0.00500	mg/L	0.004948	-0.00500	mg/L	0.004948	99.01%
Sn 189.927†	-73.0	-0.00752	mg/L	0.000403	-0.00752	mg/L	0.000403	5.36%
Sr 421.552†	3470.0	0.00396	mg/L	0.000068	0.00396	mg/L	0.000068	1.71%
Ti 334.903†	133.6	0.00208	mg/L	0.000292	0.00208	mg/L	0.000292	14.03%
Tl 190.801†	-54.1	-0.00123	mg/L	0.001393	-0.00123	mg/L	0.001393	113.56%
V 292.402†	1521.8	0.00550	mg/L	0.000155	0.00550	mg/L	0.000155	2.83%
Zn 206.200†	14.9	0.00393	mg/L	0.000099	0.00393	mg/L	0.000099	2.51%

Sequence No.: 15
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/15/2012 1:49:44 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2530961.6	100.9	%	0.34				0.33%
ScR 361.383	329319.7	101.2	%	1.52				1.50%
Ag 328.068†	166862.2	1.002	mg/L	0.0066	1.002	mg/L	0.0066	0.66%
Al 308.215†	334769.0	198.2	mg/L	3.54	198.2	mg/L	3.54	1.78%
As 188.979†	1807.7	1.017	mg/L	0.0044	1.017	mg/L	0.0044	0.43%
B 249.677†	3.2	-0.00167	mg/L	0.001704	-0.00167	mg/L	0.001704	102.07%
Ba 233.527†	4477.7	1.021	mg/L	0.0167	1.021	mg/L	0.0167	1.63%
Be 313.042†	623368.4	0.9858	mg/L	0.01758	0.9858	mg/L	0.01758	1.78%
Ca 317.933†	1364418.7	102.4	mg/L	1.95	102.4	mg/L	1.95	1.90%
Cd 228.802†	31795.5	1.058	mg/L	0.0036	1.058	mg/L	0.0036	0.34%
Co 228.616†	33338.8	1.023	mg/L	0.0024	1.023	mg/L	0.0024	0.24%
Cr 267.716†	6121.4	1.047	mg/L	0.0164	1.047	mg/L	0.0164	1.57%
Cu 324.752†	255422.7	1.070	mg/L	0.0063	1.070	mg/L	0.0063	0.59%
Fe 273.955†	249900.7	204.9	mg/L	3.46	204.9	mg/L	3.46	1.69%
K 766.490†	-100.3	-0.05360	mg/L	0.032207	-0.05360	mg/L	0.032207	60.09%
Mg 279.077†	141378.8	101.2	mg/L	1.83	101.2	mg/L	1.83	1.81%
Mn 257.610†	34397.3	1.015	mg/L	0.0164	1.015	mg/L	0.0164	1.61%
Mo 202.031†	45.2	0.00122	mg/L	0.000333	0.00122	mg/L	0.000333	27.42%
Na 589.592†	242.2	0.02025	mg/L	0.001721	0.02025	mg/L	0.001721	8.49%
Na 330.237†	9.2	0.01956	mg/L	0.049198	0.01956	mg/L	0.049198	251.46%
Ni 231.604†	3683.4	0.9603	mg/L	0.01565	0.9603	mg/L	0.01565	1.63%
Pb 220.353†	7065.9	0.9654	mg/L	0.00294	0.9654	mg/L	0.00294	0.30%
Sb 206.836†	3200.6	1.023	mg/L	0.0032	1.023	mg/L	0.0032	0.31%
Se 196.026†	1399.9	1.004	mg/L	0.0011	1.004	mg/L	0.0011	0.11%
Si 288.158†	-38.7	-0.00301	mg/L	0.002340	-0.00301	mg/L	0.002340	77.63%
Sn 189.927†	-72.1	-0.00648	mg/L	0.000841	-0.00648	mg/L	0.000841	12.97%
Sr 421.552†	3496.3	0.00399	mg/L	0.000093	0.00399	mg/L	0.000093	2.33%
Ti 334.903†	132.8	0.00172	mg/L	0.000463	0.00172	mg/L	0.000463	26.95%
Tl 190.801†	2184.9	0.9220	mg/L	0.00291	0.9220	mg/L	0.00291	0.32%
V 292.402†	124458.0	1.018	mg/L	0.0034	1.018	mg/L	0.0034	0.33%
Zn 206.200†	3684.0	0.9733	mg/L	0.01605	0.9733	mg/L	0.01605	1.65%

Sequence No.: 16
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 11/15/2012 1:53:48 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2631160.7	104.9	%	0.72				0.69%
ScR 361.383	333736.6	102.6	%	1.60				1.56%
Ag 328.068†	157764.2	0.9476	mg/L	0.00239	0.9476	mg/L	0.00239	0.25%
Al 308.215†	3510.1	2.044	mg/L	0.0431	2.044	mg/L	0.0431	2.11%
As 188.979†	3486.8	2.000	mg/L	0.0093	2.000	mg/L	0.0093	0.47%
B 249.677†	7153.5	0.9766	mg/L	0.01796	0.9766	mg/L	0.01796	1.84%
Ba 233.527†	4380.7	1.032	mg/L	0.0197	1.032	mg/L	0.0197	1.91%
Be 313.042†	610117.8	0.9648	mg/L	0.01118	0.9648	mg/L	0.01118	1.16%
Ca 317.933†	26530.4	1.992	mg/L	0.0246	1.992	mg/L	0.0246	1.23%
Cd 228.802†	31458.8	1.043	mg/L	0.0040	1.043	mg/L	0.0040	0.38%
Co 228.616†	33390.0	1.025	mg/L	0.0041	1.025	mg/L	0.0041	0.40%
Cr 267.716†	6135.9	1.051	mg/L	0.0175	1.051	mg/L	0.0175	1.66%
Cu 324.752†	242153.7	1.006	mg/L	0.0014	1.006	mg/L	0.0014	0.14%
Fe 273.955†	2651.6	2.168	mg/L	0.0400	2.168	mg/L	0.0400	1.84%
K 766.490†	37450.8	20.02	mg/L	0.247	20.02	mg/L	0.247	1.23%
Mg 279.077†	2894.2	2.080	mg/L	0.0422	2.080	mg/L	0.0422	2.03%
Mn 257.610†	34647.8	1.023	mg/L	0.0136	1.023	mg/L	0.0136	1.33%
Mo 202.031†	19442.4	1.025	mg/L	0.0055	1.025	mg/L	0.0055	0.54%
Na 589.592†	586991.8	49.10	mg/L	0.661	49.10	mg/L	0.661	1.35%
Na 330.237†	1423.9	52.18	mg/L	0.659	52.18	mg/L	0.659	1.26%
Ni 231.604†	3792.2	0.9888	mg/L	0.01597	0.9888	mg/L	0.01597	1.61%
Pb 220.353†	15113.1	1.981	mg/L	0.0113	1.981	mg/L	0.0113	0.57%
Sb 206.836†	6508.6	2.102	mg/L	0.0135	2.102	mg/L	0.0135	0.64%
Se 196.026†	2742.6	1.969	mg/L	0.0128	1.969	mg/L	0.0128	0.65%
Si 288.158†	4292.1	2.119	mg/L	0.0491	2.119	mg/L	0.0491	2.32%
Sn 189.927†	3788.8	1.034	mg/L	0.0047	1.034	mg/L	0.0047	0.45%
Sr 421.552†	848001.7	0.9667	mg/L	0.01323	0.9667	mg/L	0.01323	1.37%
Ti 334.903†	20178.2	1.035	mg/L	0.0133	1.035	mg/L	0.0133	1.29%
Tl 190.801†	4670.0	1.936	mg/L	0.0105	1.936	mg/L	0.0105	0.54%
V 292.402†	122790.6	1.011	mg/L	0.0029	1.011	mg/L	0.0029	0.28%
Zn 206.200†	3940.7	1.041	mg/L	0.0187	1.041	mg/L	0.0187	1.80%

Sequence No.: 17
Sample ID: CB 7
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 1:58:41 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2598309.3	103.6	%	0.39				0.38%
ScR 361.383	332820.6	102.3	%	1.59				1.55%
Ag 328.068†	-43.5	-0.00026	mg/L	0.000292	-0.00026	mg/L	0.000292	111.82%
Al 308.215†	13.6	0.00802	mg/L	0.006404	0.00802	mg/L	0.006404	79.85%
As 188.979†	3.1	0.00180	mg/L	0.002055	0.00180	mg/L	0.002055	114.02%
B 249.677†	10.6	0.00144	mg/L	0.001157	0.00144	mg/L	0.001157	80.08%
Ba 233.527†	-0.8	-0.00020	mg/L	0.000110	-0.00020	mg/L	0.000110	56.08%
Be 313.042†	92.0	0.00015	mg/L	0.000092	0.00015	mg/L	0.000092	63.44%
Ca 317.933†	-5.1	-0.00038	mg/L	0.000262	-0.00038	mg/L	0.000262	68.25%
Cd 228.802†	-6.5	-0.00023	mg/L	0.000098	-0.00023	mg/L	0.000098	42.57%
Co 228.616†	12.7	0.00039	mg/L	0.000073	0.00039	mg/L	0.000073	18.74%
Cr 267.716†	0.2	0.00003	mg/L	0.000294	0.00003	mg/L	0.000294	916.67%
Cu 324.752†	-140.3	-0.00058	mg/L	0.000039	-0.00058	mg/L	0.000039	6.73%
Fe 273.955†	6.4	0.00527	mg/L	0.001331	0.00527	mg/L	0.001331	25.26%
K 766.490†	-9.4	-0.00500	mg/L	0.008646	-0.00500	mg/L	0.008646	172.80%
Mg 279.077†	9.4	0.00672	mg/L	0.003754	0.00672	mg/L	0.003754	55.84%
Mn 257.610†	0.4	0.00001	mg/L	0.000029	0.00001	mg/L	0.000029	279.28%
Mo 202.031†	9.8	0.00052	mg/L	0.000186	0.00052	mg/L	0.000186	36.03%
Na 589.592†	11.6	0.00097	mg/L	0.001463	0.00097	mg/L	0.001463	150.89%
Na 330.237†	0.5	0.01764	mg/L	0.464143	0.01764	mg/L	0.464143	>999.9%
Ni 231.604†	0.9	0.00023	mg/L	0.000683	0.00023	mg/L	0.000683	301.45%
Pb 220.353†	3.4	0.00045	mg/L	0.000568	0.00045	mg/L	0.000568	126.42%
Sb 206.836†	12.3	0.00397	mg/L	0.001304	0.00397	mg/L	0.001304	32.83%
Se 196.026†	0.7	0.00047	mg/L	0.000795	0.00047	mg/L	0.000795	167.77%
Si 288.158†	-4.6	-0.00229	mg/L	0.001650	-0.00229	mg/L	0.001650	72.01%
Sn 189.927†	-0.5	-0.00013	mg/L	0.000511	-0.00013	mg/L	0.000511	399.34%
Sr 421.552†	155.9	0.00018	mg/L	0.000070	0.00018	mg/L	0.000070	39.27%
Ti 334.903†	14.9	0.00076	mg/L	0.000326	0.00076	mg/L	0.000326	42.65%
Tl 190.801†	0.6	0.00025	mg/L	0.003008	0.00025	mg/L	0.003008	>999.9%
V 292.402†	2.7	0.00002	mg/L	0.000150	0.00002	mg/L	0.000150	686.91%
Zn 206.200†	1.6	0.00043	mg/L	0.000635	0.00043	mg/L	0.000635	147.34%

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Analysis Begun

Start Time: 11/15/2012 2:50:26 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: CV 8
Autosampler Location: 7
Date Collected: 11/15/2012 2:50:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2552427.6	101.8	%	0.17				0.17%
ScR 361.383	326683.9	100.4	%	1.84				1.84%
Ag 328.068†	162791.0	0.9778	mg/L	0.00698	0.9778	mg/L	0.00698	0.71%
Al 308.215†	3445.5	2.005	mg/L	0.0468	2.005	mg/L	0.0468	2.33%
As 188.979†	3461.6	1.987	mg/L	0.0150	1.987	mg/L	0.0150	0.76%
B 249.677†	7062.7	0.9642	mg/L	0.02268	0.9642	mg/L	0.02268	2.35%
Ba 233.527†	4323.2	1.018	mg/L	0.0247	1.018	mg/L	0.0247	2.42%
Be 313.042†	612851.3	0.9691	mg/L	0.01395	0.9691	mg/L	0.01395	1.44%
Ca 317.933†	27510.7	2.065	mg/L	0.0492	2.065	mg/L	0.0492	2.38%
Cd 228.802†	31659.0	1.049	mg/L	0.0053	1.049	mg/L	0.0053	0.50%
Co 228.616†	33402.8	1.025	mg/L	0.0053	1.025	mg/L	0.0053	0.52%
Cr 267.716†	6028.8	1.033	mg/L	0.0203	1.033	mg/L	0.0203	1.96%
Cu 324.752†	249795.5	1.038	mg/L	0.0045	1.038	mg/L	0.0045	0.43%
Fe 273.955†	2581.1	2.110	mg/L	0.0548	2.110	mg/L	0.0548	2.60%
K 766.490†	37760.3	20.18	mg/L	0.296	20.18	mg/L	0.296	1.47%
Mg 279.077†	2808.1	2.019	mg/L	0.0491	2.019	mg/L	0.0491	2.43%
Mn 257.610†	35880.7	1.059	mg/L	0.0270	1.059	mg/L	0.0270	2.55%
Mo 202.031†	19367.6	1.021	mg/L	0.0058	1.021	mg/L	0.0058	0.56%
Na 589.592†	593753.9	49.66	mg/L	0.785	49.66	mg/L	0.785	1.58%
Na 330.237†	1407.6	51.60	mg/L	1.385	51.60	mg/L	1.385	2.68%
Ni 231.604†	3738.1	0.9747	mg/L	0.02299	0.9747	mg/L	0.02299	2.36%
Pb 220.353†	15019.1	1.969	mg/L	0.0107	1.969	mg/L	0.0107	0.54%
Sb 206.836†	6494.9	2.098	mg/L	0.0107	2.098	mg/L	0.0107	0.51%
Se 196.026†	2722.7	1.954	mg/L	0.0151	1.954	mg/L	0.0151	0.77%
Si 288.158†	4247.9	2.097	mg/L	0.0444	2.097	mg/L	0.0444	2.12%
Sn 189.927†	3761.1	1.026	mg/L	0.0075	1.026	mg/L	0.0075	0.73%
Sr 421.552†	856750.7	0.9766	mg/L	0.01547	0.9766	mg/L	0.01547	1.58%
Ti 334.903†	20976.9	1.076	mg/L	0.0274	1.076	mg/L	0.0274	2.55%
Tl 190.801†	4645.2	1.926	mg/L	0.0092	1.926	mg/L	0.0092	0.48%
V 292.402†	124905.9	1.028	mg/L	0.0073	1.028	mg/L	0.0073	0.71%
Zn 206.200†	3869.1	1.022	mg/L	0.0238	1.022	mg/L	0.0238	2.33%

Sequence No.: 2
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 11/15/2012 2:54:48 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2540222.1	101.3	%	0.38				0.38%
ScR 361.383	334090.0	102.7	%	1.70				1.66%
Ag 328.068†	-6.0	-0.00004	mg/L	0.000164	-0.00004	mg/L	0.000164	453.76%
Al 308.215†	12.7	0.00753	mg/L	0.007944	0.00753	mg/L	0.007944	105.52%
As 188.979†	2.0	0.00115	mg/L	0.001076	0.00115	mg/L	0.001076	93.31%
B 249.677†	5.2	0.00071	mg/L	0.000891	0.00071	mg/L	0.000891	124.72%
Ba 233.527†	-2.3	-0.00055	mg/L	0.000942	-0.00055	mg/L	0.000942	171.90%
Be 313.042†	96.2	0.00015	mg/L	0.000031	0.00015	mg/L	0.000031	20.15%
Ca 317.933†	-1.2	-0.00009	mg/L	0.000436	-0.00009	mg/L	0.000436	484.60%
Cd 228.802†	-0.6	-0.00003	mg/L	0.000129	-0.00003	mg/L	0.000129	488.73%
Co 228.616†	12.1	0.00037	mg/L	0.000074	0.00037	mg/L	0.000074	19.91%
Cr 267.716†	-1.9	-0.00033	mg/L	0.000770	-0.00033	mg/L	0.000770	231.58%
Cu 324.752†	-75.4	-0.00031	mg/L	0.000058	-0.00031	mg/L	0.000058	18.55%
Fe 273.955†	3.4	0.00281	mg/L	0.002675	0.00281	mg/L	0.002675	95.10%
K 766.490†	-38.5	-0.02055	mg/L	0.010179	-0.02055	mg/L	0.010179	49.53%
Mg 279.077†	4.0	0.00287	mg/L	0.003975	0.00287	mg/L	0.003975	138.60%
Mn 257.610†	-0.0	-0.00000	mg/L	0.000225	-0.00000	mg/L	0.000225	>999.9%
Mo 202.031†	14.6	0.00077	mg/L	0.000161	0.00077	mg/L	0.000161	20.93%
Na 589.592†	26.8	0.00224	mg/L	0.001911	0.00224	mg/L	0.001911	85.32%
Na 330.237†	8.4	0.3075	mg/L	0.14284	0.3075	mg/L	0.14284	46.46%
Ni 231.604†	-1.1	-0.00029	mg/L	0.000455	-0.00029	mg/L	0.000455	157.78%
Pb 220.353†	0.2	0.00003	mg/L	0.000447	0.00003	mg/L	0.000447	>999.9%
Sb 206.836†	13.2	0.00429	mg/L	0.001267	0.00429	mg/L	0.001267	29.57%
Se 196.026†	-1.6	-0.00115	mg/L	0.001926	-0.00115	mg/L	0.001926	167.27%
Si 288.158†	-4.2	-0.00205	mg/L	0.002835	-0.00205	mg/L	0.002835	138.17%
Sn 189.927†	2.4	0.00064	mg/L	0.000448	0.00064	mg/L	0.000448	69.55%
Sr 421.552†	159.1	0.00018	mg/L	0.000016	0.00018	mg/L	0.000016	9.06%
Ti 334.903†	20.9	0.00107	mg/L	0.001015	0.00107	mg/L	0.001015	94.59%
Tl 190.801†	-0.3	-0.00011	mg/L	0.000323	-0.00011	mg/L	0.000323	297.14%
V 292.402†	12.3	0.00010	mg/L	0.000007	0.00010	mg/L	0.000007	7.28%
Zn 206.200†	1.4	0.00036	mg/L	0.000210	0.00036	mg/L	0.000210	58.58%

Sequence No.: 3
Sample ID: VR32 MB1 SWC

Autosampler Location: 342
Date Collected: 11/15/2012 2:59:04 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2579128.3	102.8	%	0.81				0.78%
ScR 361.383	334613.8	102.8	%	0.28				0.27%
Ag 328.068†	-23.0	-0.00014	mg/L	0.000133	-0.00028	mg/L	0.000267	96.75%
Al 308.215†	-1.4	-0.00081	mg/L	0.008402	-0.00163	mg/L	0.016805	>999.9%
As 188.979†	0.6	0.00036	mg/L	0.001339	0.00073	mg/L	0.002677	369.14%
B 249.677†	9.5	0.00129	mg/L	0.000351	0.00259	mg/L	0.000703	27.19%
Ba 233.527†	0.2	0.00004	mg/L	0.000758	0.00009	mg/L	0.001516	>999.9%
Be 313.042†	47.2	0.00007	mg/L	0.000029	0.00015	mg/L	0.000059	39.39%
Ca 317.933†	59.1	0.00444	mg/L	0.000471	0.00887	mg/L	0.000942	10.62%
Cd 228.802†	-5.6	-0.00019	mg/L	0.000092	-0.00038	mg/L	0.000184	47.94%
Co 228.616†	10.0	0.00031	mg/L	0.000105	0.00061	mg/L	0.000210	34.25%
Cr 267.716†	4.3	0.00073	mg/L	0.000868	0.00146	mg/L	0.001736	119.07%
Cu 324.752†	-135.0	-0.00056	mg/L	0.000043	-0.00112	mg/L	0.000086	7.62%
Fe 273.955†	12.9	0.01055	mg/L	0.000430	0.02110	mg/L	0.000859	4.07%
K 766.490†	-20.5	-0.01098	mg/L	0.006296	-0.02196	mg/L	0.012592	57.33%
Mg 279.077†	9.6	0.00686	mg/L	0.002460	0.01372	mg/L	0.004919	35.86%
Mn 257.610†	20.6	0.00061	mg/L	0.000034	0.00122	mg/L	0.000068	5.62%
Mo 202.031†	4.9	0.00026	mg/L	0.000293	0.00052	mg/L	0.000586	112.80%
Na 589.592†	12.9	0.00108	mg/L	0.003057	0.00216	mg/L	0.006114	283.66%
Na 330.237†	6.4	0.2348	mg/L	0.27067	0.4695	mg/L	0.54133	115.30%
Ni 231.604†	-5.1	-0.00132	mg/L	0.001382	-0.00263	mg/L	0.002765	104.96%
Pb 220.353†	-2.8	-0.00036	mg/L	0.000334	-0.00072	mg/L	0.000667	92.89%
Sb 206.836†	6.9	0.00224	mg/L	0.001104	0.00448	mg/L	0.002209	49.33%
Se 196.026†	1.7	0.00121	mg/L	0.005255	0.00241	mg/L	0.010511	435.66%
Si 288.158†	-1.0	-0.00047	mg/L	0.006058	-0.00095	mg/L	0.012116	>999.9%
Sn 189.927†	2.5	0.00068	mg/L	0.000353	0.00136	mg/L	0.000705	51.97%
Sr 421.552†	102.4	0.00012	mg/L	0.000016	0.00023	mg/L	0.000031	13.42%
Ti 334.903†	12.8	0.00066	mg/L	0.000965	0.00131	mg/L	0.001930	147.19%
Tl 190.801†	0.5	0.00019	mg/L	0.000495	0.00039	mg/L	0.000990	255.20%
V 292.402†	1.2	0.00001	mg/L	0.000255	0.00002	mg/L	0.000510	>999.9%
Zn 206.200†	6.8	0.00180	mg/L	0.000745	0.00361	mg/L	0.001491	41.32%

Sequence No.: 4
Sample ID: VR32 B SWC

Autosampler Location: 343
Date Collected: 11/15/2012 3:03:21 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2578036.0	102.8	%	0.17				0.17%
ScR 361.383	340678.8	104.7	%	2.57				2.45%
Ag 328.068†	-368.0	-0.00211	mg/L	0.000147	-0.00423	mg/L	0.000293	6.94%
Al 308.215†	263592.3	156.1	mg/L	4.95	312.1	mg/L	9.89	3.17%
As 188.979†	12.8	0.1772	mg/L	0.00488	0.3543	mg/L	0.00975	2.75%
B 249.677†	129.2	0.01749	mg/L	0.000071	0.03498	mg/L	0.000141	0.40%
Ba 233.527†	14044.2	3.277	mg/L	0.0837	6.553	mg/L	0.1674	2.55%
Be 313.042†	2816.6	0.00432	mg/L	0.000132	0.00863	mg/L	0.000263	3.05%
Ca 317.933†	481629.0	36.16	mg/L	1.144	72.32	mg/L	2.288	3.16%
Cd 228.802†	1667.0	0.05404	mg/L	0.000178	0.1081	mg/L	0.00036	0.33%
Co 228.616†	2782.9	0.07110	mg/L	0.000332	0.1422	mg/L	0.00066	0.47%
Cr 267.716†	964.8	0.1677	mg/L	0.00328	0.3354	mg/L	0.00656	1.96%
Cu 324.752†	38035.6	0.1653	mg/L	0.00076	0.3306	mg/L	0.00153	0.46%
Fe 273.955†	242703.7	199.0	mg/L	6.79	398.1	mg/L	13.58	3.41%
K 766.490†	32241.4	17.23	mg/L	0.560	34.46	mg/L	1.120	3.25%
Mg 279.077†	61113.6	43.67	mg/L	1.378	87.34	mg/L	2.756	3.16%
Mn 257.610†	459848.6	13.57	mg/L	0.438	27.13	mg/L	0.877	3.23%
Mo 202.031†	114.7	0.00564	mg/L	0.000148	0.01129	mg/L	0.000296	2.62%
Na 589.592†	23314.5	1.950	mg/L	0.0562	3.900	mg/L	0.1124	2.88%
Na 330.237†	28.5	1.571	mg/L	0.2179	3.141	mg/L	0.4359	13.88%
Ni 231.604†	452.4	0.1179	mg/L	0.00488	0.2359	mg/L	0.00976	4.14%
Pb 220.353†	15722.3	2.089	mg/L	0.0064	4.178	mg/L	0.0127	0.31%
Sb 206.836†	54.3	0.01907	mg/L	0.002948	0.03813	mg/L	0.005895	15.46%
Se 196.026†	22.9	0.01619	mg/L	0.008116	0.03238	mg/L	0.016232	50.13%
Si 288.158†	7078.1	3.501	mg/L	0.1024	7.001	mg/L	0.2048	2.92%
Sn 189.927†	-20.5	-0.00018	mg/L	0.001291	-0.00036	mg/L	0.002581	715.13%
Sr 421.552†	479266.9	0.5463	mg/L	0.01679	1.093	mg/L	0.0336	3.07%
Ti 334.903†	117206.9	6.015	mg/L	0.1876	12.03	mg/L	0.375	3.12%
Tl 190.801†	-37.2	0.00411	mg/L	0.004269	0.00821	mg/L	0.008538	103.95%
V 292.402†	40886.0	0.3276	mg/L	0.00125	0.6551	mg/L	0.00250	0.38%
Zn 206.200†	9698.8	2.563	mg/L	0.0671	5.125	mg/L	0.1342	2.62%

Sequence No.: 5
Sample ID: VR32 C SWC

Autosampler Location: 344
Date Collected: 11/15/2012 3:07:23 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2602599.2	103.8	%	0.64				0.62%
ScR 361.383	336235.1	103.3	%	0.75				0.72%
Ag 328.068†	-419.0	-0.00243	mg/L	0.000093	-0.00485	mg/L	0.000187	3.85%
Al 308.215†	378777.2	224.3	mg/L	2.48	448.5	mg/L	4.95	1.10%
As 188.979†	-202.6	0.08045	mg/L	0.003375	0.1609	mg/L	0.00675	4.19%
B 249.677†	135.7	0.01836	mg/L	0.001045	0.03671	mg/L	0.002089	5.69%
Ba 233.527†	13876.4	3.236	mg/L	0.0405	6.471	mg/L	0.0810	1.25%
Be 313.042†	4042.0	0.00625	mg/L	0.000082	0.01250	mg/L	0.000164	1.32%
Ca 317.933†	557678.1	41.87	mg/L	0.540	83.73	mg/L	1.080	1.29%
Cd 228.802†	248.2	0.00727	mg/L	0.000160	0.01453	mg/L	0.000320	2.20%
Co 228.616†	2972.4	0.07506	mg/L	0.000111	0.1501	mg/L	0.00022	0.15%
Cr 267.716†	1836.7	0.3180	mg/L	0.00333	0.6359	mg/L	0.00665	1.05%
Cu 324.752†	43799.2	0.1895	mg/L	0.00121	0.3790	mg/L	0.00242	0.64%
Fe 273.955†	254073.2	208.4	mg/L	2.49	416.7	mg/L	4.98	1.19%
K 766.490†	31317.1	16.74	mg/L	0.136	33.47	mg/L	0.272	0.81%
Mg 279.077†	61077.1	43.64	mg/L	0.562	87.28	mg/L	1.124	1.29%
Mn 257.610†	299257.4	8.828	mg/L	0.1048	17.66	mg/L	0.210	1.19%
Mo 202.031†	94.1	0.00449	mg/L	0.000342	0.00898	mg/L	0.000685	7.63%
Na 589.592†	25159.8	2.104	mg/L	0.0208	4.209	mg/L	0.0416	0.99%
Na 330.237†	7.9	1.576	mg/L	0.2404	3.153	mg/L	0.4809	15.25%
Ni 231.604†	761.0	0.1984	mg/L	0.00308	0.3968	mg/L	0.00616	1.55%
Pb 220.353†	1833.5	0.2857	mg/L	0.00113	0.5713	mg/L	0.00226	0.39%
Sb 206.836†	17.3	0.00516	mg/L	0.002578	0.01033	mg/L	0.005155	49.92%
Se 196.026†	23.5	0.01668	mg/L	0.001590	0.03336	mg/L	0.003181	9.53%
Si 288.158†	12003.8	5.933	mg/L	0.0765	11.87	mg/L	0.153	1.29%
Sn 189.927†	-50.1	-0.00745	mg/L	0.000511	-0.01491	mg/L	0.001021	6.85%
Sr 421.552†	476444.0	0.5431	mg/L	0.00529	1.086	mg/L	0.0106	0.97%
Ti 334.903†	134788.1	6.917	mg/L	0.0811	13.83	mg/L	0.162	1.17%
Tl 190.801†	-43.8	0.00234	mg/L	0.003454	0.00467	mg/L	0.006909	147.82%
V 292.402†	37872.7	0.3019	mg/L	0.00241	0.6039	mg/L	0.00483	0.80%
Zn 206.200†	3298.0	0.8713	mg/L	0.01343	1.743	mg/L	0.0269	1.54%

Sequence No.: 6
Sample ID: VR32 D SWC

Autosampler Location: 345
Date Collected: 11/15/2012 3:11:25 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2595917.4	103.5	%	0.53				0.51%
ScR 361.383	336832.6	103.5	%	1.71				1.66%
Ag 328.068†	-167.9	-0.00095	mg/L	0.000052	-0.00189	mg/L	0.000104	5.49%
Al 308.215†	296020.0	175.3	mg/L	4.48	350.5	mg/L	8.97	2.56%
As 188.979†	-153.0	0.06605	mg/L	0.000133	0.1321	mg/L	0.00027	0.20%
B 249.677†	141.7	0.01924	mg/L	0.000309	0.03848	mg/L	0.000618	1.61%
Ba 233.527†	19185.3	4.497	mg/L	0.0751	8.994	mg/L	0.1503	1.67%
Be 313.042†	2591.7	0.00399	mg/L	0.000079	0.00798	mg/L	0.000157	1.97%
Ca 317.933†	380344.3	28.55	mg/L	0.760	57.11	mg/L	1.520	2.66%
Cd 228.802†	526.7	0.01696	mg/L	0.000236	0.03391	mg/L	0.000471	1.39%
Co 228.616†	1998.8	0.04878	mg/L	0.000475	0.09757	mg/L	0.000950	0.97%
Cr 267.716†	760.6	0.1324	mg/L	0.00119	0.2649	mg/L	0.00238	0.90%
Cu 324.752†	24134.9	0.1054	mg/L	0.00038	0.2108	mg/L	0.00075	0.36%
Fe 273.955†	176825.3	145.0	mg/L	3.99	290.0	mg/L	7.97	2.75%
K 766.490†	18869.8	10.08	mg/L	0.259	20.17	mg/L	0.518	2.57%
Mg 279.077†	33543.6	23.95	mg/L	0.384	47.90	mg/L	0.768	1.60%
Mn 257.610†	445474.1	13.14	mg/L	0.348	26.28	mg/L	0.696	2.65%
Mo 202.031†	88.0	0.00432	mg/L	0.000286	0.00865	mg/L	0.000571	6.61%
Na 589.592†	26774.7	2.239	mg/L	0.0619	4.479	mg/L	0.1239	2.77%
Na 330.237†	27.6	1.719	mg/L	0.3455	3.438	mg/L	0.6909	20.10%
Ni 231.604†	466.2	0.1215	mg/L	0.00136	0.2430	mg/L	0.00272	1.12%
Pb 220.353†	5136.2	0.7090	mg/L	0.00268	1.418	mg/L	0.0054	0.38%
Sb 206.836†	13.8	0.00568	mg/L	0.001064	0.01137	mg/L	0.002129	18.73%
Se 196.026†	24.2	0.01725	mg/L	0.002629	0.03449	mg/L	0.005259	15.25%
Si 288.158†	10521.1	5.198	mg/L	0.0758	10.40	mg/L	0.152	1.46%
Sn 189.927†	-37.3	-0.00584	mg/L	0.000814	-0.01168	mg/L	0.001629	13.94%
Sr 421.552†	428641.5	0.4886	mg/L	0.01249	0.9772	mg/L	0.02498	2.56%
Ti 334.903†	105158.1	5.397	mg/L	0.1405	10.79	mg/L	0.281	2.60%
Tl 190.801†	-28.5	0.00251	mg/L	0.002256	0.00501	mg/L	0.004511	90.01%
V 292.402†	26041.5	0.2079	mg/L	0.00127	0.4158	mg/L	0.00253	0.61%
Zn 206.200†	6005.5	1.587	mg/L	0.0258	3.173	mg/L	0.0517	1.63%

BA 11/16/12

Sequence No.: 7 zzzzzz

Sample ID: VR32 A-L SWC

Del

Autosampler Location: 346
Date Collected: 11/15/2012 3:15:27 PM
Data Type: Original

Dilution: 1.000000X

10 BA 11/16/12

Nebulizer Parameters: VR32 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2651563.3	105.7	%	0.63				0.60%
ScR 361.383	337862.3	103.8	%	1.27				1.22%
Ag 328.068†	-115.4	-0.00067	mg/L	0.000056	-0.00134	mg/L	0.000112	8.32%
Al 308.215†	87036.7	51.53	mg/L	0.861	103.1	mg/L	1.72	1.67%
As 188.979†	-6.9	0.03999	mg/L	0.002050	0.07997	mg/L	0.004101	5.13%
B 249.677†	43.7	0.00593	mg/L	0.000649	0.01186	mg/L	0.001297	10.94%
Ba 233.527†	3643.7	0.8495	mg/L	0.00957	1.699	mg/L	0.0191	1.13%
Be 313.042†	1101.9	0.00171	mg/L	0.000029	0.00342	mg/L	0.000057	1.67%
Ca 317.933†	138147.6	10.37	mg/L	0.178	20.74	mg/L	0.357	1.72%
Cd 228.802†	143.2	0.00436	mg/L	0.000140	0.00872	mg/L	0.000280	3.21%
Co 228.616†	812.0	0.02117	mg/L	0.000406	0.04233	mg/L	0.000812	1.92%
Cr 267.716†	441.1	0.07641	mg/L	0.000113	0.1528	mg/L	0.00023	0.15%
Cu 324.752†	8568.0	0.03765	mg/L	0.000301	0.07529	mg/L	0.000603	0.80%
Fe 273.955†	67536.5	55.39	mg/L	0.893	110.8	mg/L	1.79	1.61%
K 766.490†	8651.6	4.624	mg/L	0.0772	9.248	mg/L	0.1544	1.67%
Mg 279.077†	16376.1	11.70	mg/L	0.204	23.40	mg/L	0.408	1.74%
Mn 257.610†	90367.8	2.666	mg/L	0.0408	5.332	mg/L	0.0815	1.53%
Mo 202.031†	41.2	0.00206	mg/L	0.000184	0.00411	mg/L	0.000369	8.96%
Na 589.592†	5714.7	0.4780	mg/L	0.01021	0.9559	mg/L	0.02042	2.14%
Na 330.237†	-1.9	0.1408	mg/L	0.23574	0.2815	mg/L	0.47149	167.46%
Ni 231.604†	256.5	0.06687	mg/L	0.001741	0.1337	mg/L	0.00348	2.60%
Pb 220.353†	841.8	0.1204	mg/L	0.00074	0.2409	mg/L	0.00149	0.62%
Sb 206.836†	9.2	0.00280	mg/L	0.001389	0.00560	mg/L	0.002778	49.65%
Se 196.026†	5.2	0.00369	mg/L	0.003179	0.00738	mg/L	0.006357	86.10%
Si 288.158†	1989.2	0.9837	mg/L	0.02022	1.967	mg/L	0.0404	2.06%
Sn 189.927†	-17.7	-0.00332	mg/L	0.000565	-0.00663	mg/L	0.001129	17.03%
Sr 421.552†	123026.5	0.1402	mg/L	0.00229	0.2805	mg/L	0.00457	1.63%
Ti 334.903†	30354.9	1.558	mg/L	0.0243	3.115	mg/L	0.0487	1.56%
Tl 190.801†	-4.1	0.00381	mg/L	0.002410	0.00762	mg/L	0.004819	63.29%
V 292.402†	8743.9	0.06959	mg/L	0.000536	0.1392	mg/L	0.00107	0.77%
Zn 206.200†	1645.5	0.4348	mg/L	0.00314	0.8695	mg/L	0.00628	0.72%

Sequence No.: 8
Sample ID: VR32 A SWC

Dilution: 2.000000X

Del

Autosampler Location: 347
Date Collected: 11/15/2012 3:19:28 PM
Data Type: Original

Nebulizer Parameters: VR32 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2618309.3	104.4	%	0.40				0.38%
ScR 361.383	343246.4	105.5	%	0.85				0.81%
Ag 328.068†	-478.7	-0.00278	mg/L	0.000010	-0.00555	mg/L	0.000020	0.36%
Al 308.215†	410805.9	243.2	mg/L	5.02	486.4	mg/L	10.05	2.07%
As 188.979†	-53.6	0.1725	mg/L	0.00526	0.3451	mg/L	0.01051	3.05%
B 249.677†	185.4	0.02511	mg/L	0.001064	0.05021	mg/L	0.002127	4.24%
Ba 233.527†	16836.2	3.926	mg/L	0.0433	7.851	mg/L	0.0867	1.10%
Be 313.042†	4934.4	0.00765	mg/L	0.000094	0.01530	mg/L	0.000188	1.23%
Ca 317.933†	638904.1	47.96	mg/L	1.037	95.93	mg/L	2.075	2.16%
Cd 228.802†	726.2	0.02240	mg/L	0.000180	0.04481	mg/L	0.000359	0.80%
Co 228.616†	3690.7	0.09594	mg/L	0.000414	0.1919	mg/L	0.00083	0.43%
Cr 267.716†	2005.5	0.3473	mg/L	0.00450	0.6947	mg/L	0.00900	1.30%
Cu 324.752†	43030.3	0.1882	mg/L	0.00078	0.3763	mg/L	0.00157	0.42%
Fe 273.955†	309450.4	253.8	mg/L	4.60	507.6	mg/L	9.19	1.81%
K 766.490†	40787.9	21.80	mg/L	0.533	43.60	mg/L	1.066	2.45%
Mg 279.077†	75931.2	54.26	mg/L	1.183	108.5	mg/L	2.37	2.18%
Mn 257.610†	415995.1	12.27	mg/L	0.227	24.54	mg/L	0.453	1.85%
Mo 202.031†	136.2	0.00664	mg/L	0.000220	0.01328	mg/L	0.000439	3.31%
Na 589.592†	26736.2	2.236	mg/L	0.0437	4.472	mg/L	0.0874	1.95%
Na 330.237†	25.8	1.931	mg/L	0.1118	3.862	mg/L	0.2236	5.79%
Ni 231.604†	1172.6	0.3057	mg/L	0.00315	0.6113	mg/L	0.00629	1.03%
Pb 220.353†	3896.5	0.5587	mg/L	0.00538	1.117	mg/L	0.0108	0.96%
Sb 206.836†	30.7	0.00929	mg/L	0.001016	0.01858	mg/L	0.002033	10.94%
Se 196.026†	32.9	0.02337	mg/L	0.005248	0.04675	mg/L	0.010495	22.45%
Si 288.158†	8344.5	4.127	mg/L	0.0357	8.254	mg/L	0.0714	0.87%
Sn 189.927†	-54.2	-0.00777	mg/L	0.001135	-0.01554	mg/L	0.002270	14.60%
Sr 421.552†	568860.3	0.6485	mg/L	0.01257	1.297	mg/L	0.0251	1.94%
Ti 334.903†	140291.6	7.199	mg/L	0.1425	14.40	mg/L	0.285	1.98%
Tl 190.801†	-52.5	0.00338	mg/L	0.001566	0.00677	mg/L	0.003133	46.28%
V 292.402†	41222.2	0.3283	mg/L	0.00173	0.6566	mg/L	0.00347	0.53%
Zn 206.200†	7548.4	1.994	mg/L	0.0263	3.989	mg/L	0.0526	1.32%

Sequence No.: 9
Sample ID: VR32 ADUP SWC

Dal

Dilution: 2.000000X

Autosampler Location: 348
Date Collected: 11/15/2012 3:23:31 PM
Data Type: Original

Nebulizer Parameters: VR32 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636338.4	105.1	%	0.42				0.40%
ScR 361.383	344044.2	105.7	%	1.22				1.15%
Ag 328.068†	-501.8	-0.00291	mg/L	0.000054	-0.00582	mg/L	0.000108	1.85%
Al 308.215†	412061.2	244.0	mg/L	4.09	487.9	mg/L	8.18	1.68%
As 188.979†	-64.8	0.1768	mg/L	0.00491	0.3537	mg/L	0.00982	2.78%
B 249.677†	194.9	0.02640	mg/L	0.000474	0.05280	mg/L	0.000948	1.80%
Ba 233.527†	16895.4	3.939	mg/L	0.0558	7.877	mg/L	0.1117	1.42%
Be 313.042†	4950.4	0.00767	mg/L	0.000119	0.01534	mg/L	0.000237	1.55%
Ca 317.933†	671455.6	50.41	mg/L	1.052	100.8	mg/L	2.10	2.09%
Cd 228.802†	709.8	0.02184	mg/L	0.000495	0.04369	mg/L	0.000990	2.27%
Co 228.616†	3732.5	0.09642	mg/L	0.001255	0.1928	mg/L	0.00251	1.30%
Cr 267.716†	1914.9	0.3319	mg/L	0.00525	0.6637	mg/L	0.01050	1.58%
Cu 324.752†	46988.0	0.2048	mg/L	0.00090	0.4095	mg/L	0.00180	0.44%
Fe 273.955†	316579.0	259.6	mg/L	4.25	519.3	mg/L	8.50	1.64%
K 766.490†	42244.5	22.58	mg/L	0.506	45.15	mg/L	1.013	2.24%
Mg 279.077†	79104.7	56.53	mg/L	1.049	113.1	mg/L	2.10	1.86%
Mn 257.610†	396602.3	11.70	mg/L	0.182	23.40	mg/L	0.365	1.56%
Mo 202.031†	139.6	0.00679	mg/L	0.000107	0.01358	mg/L	0.000214	1.57%
Na 589.592†	27027.2	2.261	mg/L	0.0394	4.521	mg/L	0.0788	1.74%
Na 330.237†	18.0	1.724	mg/L	0.1631	3.448	mg/L	0.3261	9.46%
Ni 231.604†	1196.2	0.3118	mg/L	0.00400	0.6236	mg/L	0.00800	1.28%
Pb 220.353†	3934.8	0.5636	mg/L	0.00602	1.127	mg/L	0.0120	1.07%
Sb 206.836†	31.2	0.00991	mg/L	0.001280	0.01982	mg/L	0.002559	12.91%
Se 196.026†	32.8	0.02328	mg/L	0.005328	0.04655	mg/L	0.010656	22.89%
Si 288.158†	7472.0	3.697	mg/L	0.0517	7.393	mg/L	0.1034	1.40%
Sn 189.927†	-51.6	-0.00672	mg/L	0.001575	-0.01343	mg/L	0.003150	23.45%
Sr 421.552†	607091.2	0.6920	mg/L	0.01188	1.384	mg/L	0.0238	1.72%
Ti 334.903†	147594.9	7.574	mg/L	0.1293	15.15	mg/L	0.259	1.71%
Tl 190.801†	-56.0	0.00250	mg/L	0.001825	0.00501	mg/L	0.003651	72.92%
V 292.402†	42965.6	0.3420	mg/L	0.00128	0.6840	mg/L	0.00256	0.37%
Zn 206.200†	7612.2	2.011	mg/L	0.0280	4.022	mg/L	0.0560	1.39%

Sequence No.: 10
Sample ID: VR32 ASPK SWC

Dilution: 2.000000X

Dal

Autosampler Location: 349
Date Collected: 11/15/2012 3:27:33 PM
Data Type: Original

Nebulizer Parameters: VR32 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2610848.8	104.1	%	0.56				0.54%
ScR 361.383	336963.8	103.6	%	1.39				1.35%
Ag 328.068†	79042.1	0.4749	mg/L	0.00272	0.9497	mg/L	0.00544	0.57%
Al 308.215†	415063.6	245.7	mg/L	3.48	491.5	mg/L	6.95	1.41%
As 188.979†	3317.7	2.094	mg/L	0.0104	4.187	mg/L	0.0208	0.50%
B 249.677†	215.3	0.02816	mg/L	0.001603	0.05632	mg/L	0.003206	5.69%
Ba 233.527†	25241.2	5.906	mg/L	0.0840	11.81	mg/L	0.168	1.42%
Be 313.042†	304684.0	0.4817	mg/L	0.00756	0.9633	mg/L	0.01512	1.57%
Ca 317.933†	916479.6	68.80	mg/L	1.078	137.6	mg/L	2.16	1.57%
Cd 228.802†	17058.8	0.5578	mg/L	0.00286	1.116	mg/L	0.0057	0.51%
Co 228.616†	19959.3	0.5952	mg/L	0.00245	1.190	mg/L	0.0049	0.41%
Cr 267.716†	4907.7	0.8436	mg/L	0.00879	1.687	mg/L	0.0176	1.04%
Cu 324.752†	179272.7	0.7544	mg/L	0.00333	1.509	mg/L	0.0067	0.44%
Fe 273.955†	312111.4	256.0	mg/L	3.98	511.9	mg/L	7.95	1.55%
K 766.490†	60069.2	32.10	mg/L	0.432	64.21	mg/L	0.864	1.35%
Mg 279.077†	90946.2	65.01	mg/L	0.951	130.0	mg/L	1.90	1.46%
Mn 257.610†	416864.0	12.30	mg/L	0.186	24.60	mg/L	0.372	1.51%
Mo 202.031†	151.8	0.00721	mg/L	0.000637	0.01442	mg/L	0.001274	8.84%
Na 589.592†	141863.7	11.87	mg/L	0.173	23.73	mg/L	0.347	1.46%
Na 330.237†	295.1	11.76	mg/L	0.742	23.52	mg/L	1.484	6.31%
Ni 231.604†	2941.5	0.7660	mg/L	0.00741	1.532	mg/L	0.0148	0.97%
Pb 220.353†	18144.8	2.426	mg/L	0.0102	4.853	mg/L	0.0204	0.42%
Sb 206.836†	45.2	0.00907	mg/L	0.000486	0.01814	mg/L	0.000972	5.36%
Se 196.026†	2694.6	1.934	mg/L	0.0064	3.869	mg/L	0.0128	0.33%
Si 288.158†	7814.3	3.869	mg/L	0.0315	7.737	mg/L	0.0631	0.82%
Sn 189.927†	-62.8	-0.00742	mg/L	0.001370	-0.01484	mg/L	0.002740	18.46%
Sr 421.552†	1045201.4	1.191	mg/L	0.0177	2.383	mg/L	0.0353	1.48%
Ti 334.903†	149234.8	7.657	mg/L	0.1096	15.31	mg/L	0.219	1.43%
Tl 190.801†	4233.6	1.783	mg/L	0.0087	3.567	mg/L	0.0174	0.49%
V 292.402†	104376.9	0.8478	mg/L	0.00462	1.696	mg/L	0.0092	0.55%
Zn 206.200†	9424.1	2.490	mg/L	0.0312	4.980	mg/L	0.0624	1.25%

Sequence No.: 11 ZZZZZZ
Sample ID: ~~VR32 APOST SWC~~ BA 11/16/12

Autosampler Location: 350
Date Collected: 11/15/2012 3:30:53 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR32 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2648992.8	105.6	%	0.72				0.68%
ScR 361.383	340827.3	104.8	%	0.69				0.66%
Ag 328.068†	81013.6	0.4867	mg/L	0.00302	0.9734	mg/L	0.00605	0.62%
Al 308.215†	419736.8	248.5	mg/L	3.37	497.0	mg/L	6.73	1.35%
As 188.979†	3474.8	2.174	mg/L	0.0130	4.349	mg/L	0.0261	0.60%
B 249.677†	197.0	0.02564	mg/L	0.000882	0.05129	mg/L	0.001763	3.44%
Ba 233.527†	26023.1	6.089	mg/L	0.0225	12.18	mg/L	0.045	0.37%
Be 313.042†	316222.7	0.4999	mg/L	0.00626	0.9998	mg/L	0.01252	1.25%
Ca 317.933†	790185.5	59.32	mg/L	0.811	118.6	mg/L	1.62	1.37%
Cd 228.802†	17309.9	0.5656	mg/L	0.00345	1.131	mg/L	0.0069	0.61%
Co 228.616†	20361.9	0.6081	mg/L	0.00367	1.216	mg/L	0.0073	0.60%
Cr 267.716†	5073.3	0.8721	mg/L	0.00361	1.744	mg/L	0.0072	0.41%
Cu 324.752†	173848.6	0.7321	mg/L	0.00295	1.464	mg/L	0.0059	0.40%
Fe 273.955†	316828.8	259.8	mg/L	4.00	519.7	mg/L	7.99	1.54%
K 766.490†	60717.8	32.45	mg/L	0.551	64.90	mg/L	1.101	1.70%
Mg 279.077†	91970.7	65.75	mg/L	0.955	131.5	mg/L	1.91	1.45%
Mn 257.610†	439004.5	12.95	mg/L	0.186	25.90	mg/L	0.372	1.44%
Mo 202.031†	140.9	0.00674	mg/L	0.000537	0.01348	mg/L	0.001074	7.97%
Na 589.592†	143549.4	12.01	mg/L	0.156	24.01	mg/L	0.311	1.30%
Na 330.237†	300.2	11.86	mg/L	0.521	23.71	mg/L	1.042	4.39%
Ni 231.604†	3052.3	0.7948	mg/L	0.00253	1.590	mg/L	0.0051	0.32%
Pb 220.353†	18423.1	2.463	mg/L	0.0153	4.927	mg/L	0.0305	0.62%
Sb 206.836†	40.6	0.00697	mg/L	0.001300	0.01394	mg/L	0.002601	18.66%
Se 196.026†	2815.8	2.021	mg/L	0.0082	4.043	mg/L	0.0163	0.40%
Si 288.158†	9907.5	4.902	mg/L	0.0572	9.805	mg/L	0.1143	1.17%
Sn 189.927†	-51.7	-0.00560	mg/L	0.000569	-0.01119	mg/L	0.001138	10.17%
Sr 421.552†	1009610.0	1.151	mg/L	0.0163	2.302	mg/L	0.0326	1.42%
Ti 334.903†	143198.9	7.348	mg/L	0.0967	14.70	mg/L	0.193	1.32%
Tl 190.801†	4332.4	1.825	mg/L	0.0109	3.650	mg/L	0.0218	0.60%
V 292.402†	102104.4	0.8294	mg/L	0.00334	1.659	mg/L	0.0067	0.40%
Zn 206.200†	9658.4	2.552	mg/L	0.0127	5.104	mg/L	0.0253	0.50%

Sequence No.: 12 SPK BA
Sample ID: VR32 MB1 SWC 11/16/12

Autosampler Location: 351
Date Collected: 11/15/2012 3:34:13 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2641367.6	105.3	%	0.61				0.58%
ScR 361.383	337401.0	103.7	%	0.86				0.83%
Ag 328.068†	82778.0	0.4972	mg/L	0.00531	0.9944	mg/L	0.01061	1.07%
Al 308.215†	3484.4	2.056	mg/L	0.0153	4.111	mg/L	0.0306	0.74%
As 188.979†	3492.9	1.978	mg/L	0.0095	3.955	mg/L	0.0191	0.48%
B 249.677†	6.3	-0.00019	mg/L	0.000423	-0.00039	mg/L	0.000845	216.81%
Ba 233.527†	8669.5	2.042	mg/L	0.0234	4.085	mg/L	0.0468	1.15%
Be 313.042†	308997.6	0.4886	mg/L	0.00803	0.9773	mg/L	0.01607	1.64%
Ca 317.933†	132553.9	9.951	mg/L	0.1521	19.90	mg/L	0.304	1.53%
Cd 228.802†	16187.1	0.5301	mg/L	0.00385	1.060	mg/L	0.0077	0.73%
Co 228.616†	16795.5	0.5163	mg/L	0.00441	1.033	mg/L	0.0088	0.85%
Cr 267.716†	3030.9	0.5184	mg/L	0.00581	1.037	mg/L	0.0116	1.12%
Cu 324.752†	119975.6	0.4988	mg/L	0.00041	0.9976	mg/L	0.00082	0.08%
Fe 273.955†	2655.8	2.174	mg/L	0.0070	4.349	mg/L	0.0140	0.32%
K 766.490†	18385.6	9.826	mg/L	0.1482	19.65	mg/L	0.296	1.51%
Mg 279.077†	14377.5	10.30	mg/L	0.092	20.60	mg/L	0.184	0.89%
Mn 257.610†	17796.2	0.5253	mg/L	0.00404	1.051	mg/L	0.0081	0.77%
Mo 202.031†	23.4	0.00110	mg/L	0.000282	0.00220	mg/L	0.000564	25.71%
Na 589.592†	113534.0	9.496	mg/L	0.1587	18.99	mg/L	0.317	1.67%
Na 330.237†	283.7	10.26	mg/L	0.094	20.51	mg/L	0.189	0.92%
Ni 231.604†	1868.6	0.4863	mg/L	0.00441	0.9725	mg/L	0.00882	0.91%
Pb 220.353†	14609.8	1.915	mg/L	0.0219	3.830	mg/L	0.0439	1.15%
Sb 206.836†	18.8	0.00059	mg/L	0.000748	0.00119	mg/L	0.001495	126.15%
Se 196.026†	2734.1	1.963	mg/L	0.0102	3.926	mg/L	0.0204	0.52%
Si 288.158†	-9.7	-0.00155	mg/L	0.001836	-0.00311	mg/L	0.003673	118.17%
Sn 189.927†	-18.0	-0.00361	mg/L	0.000388	-0.00721	mg/L	0.000776	10.76%
Sr 421.552†	424622.4	0.4840	mg/L	0.00834	0.9681	mg/L	0.01668	1.72%
Ti 334.903†	96.1	0.00435	mg/L	0.000466	0.00871	mg/L	0.000933	10.71%
Tl 190.801†	4593.2	1.908	mg/L	0.0102	3.816	mg/L	0.0204	0.53%
V 292.402†	62234.0	0.5123	mg/L	0.00513	1.025	mg/L	0.0103	1.00%
Zn 206.200†	1886.3	0.4984	mg/L	0.00358	0.9969	mg/L	0.00717	0.72%

Sequence No.: 13
Sample ID: CV9

Autosampler Location: 7
Date Collected: 11/15/2012 3:38:14 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2625439.4	104.7	%	0.56				0.54%
ScR 361.383	332549.1	102.2	%	0.57				0.56%
Ag 328.068†	156254.8	0.9385	mg/L	0.00174	0.9385	mg/L	0.00174	0.19%
Al 308.215†	3571.8	2.081	mg/L	0.0094	2.081	mg/L	0.0094	0.45%
As 188.979†	3430.5	1.968	mg/L	0.0047	1.968	mg/L	0.0047	0.24%
B 249.677†	7133.5	0.9738	mg/L	0.00417	0.9738	mg/L	0.00417	0.43%
Ba 233.527†	4373.1	1.030	mg/L	0.0020	1.030	mg/L	0.0020	0.20%
Be 313.042†	608984.0	0.9630	mg/L	0.00204	0.9630	mg/L	0.00204	0.21%
Ca 317.933†	26591.8	1.996	mg/L	0.0027	1.996	mg/L	0.0027	0.14%
Cd 228.802†	30969.9	1.026	mg/L	0.0011	1.026	mg/L	0.0011	0.11%
Co 228.616†	33683.1	1.034	mg/L	0.0024	1.034	mg/L	0.0024	0.23%
Cr 267.716†	6101.6	1.045	mg/L	0.0020	1.045	mg/L	0.0020	0.19%
Cu 324.752†	239653.7	0.9958	mg/L	0.00071	0.9958	mg/L	0.00071	0.07%
Fe 273.955†	2687.4	2.197	mg/L	0.0105	2.197	mg/L	0.0105	0.48%
K 766.490†	37442.8	20.01	mg/L	0.080	20.01	mg/L	0.080	0.40%
Mg 279.077†	2882.4	2.072	mg/L	0.0068	2.072	mg/L	0.0068	0.33%
Mn 257.610†	34696.9	1.024	mg/L	0.0020	1.024	mg/L	0.0020	0.19%
Mo 202.031†	19127.4	1.008	mg/L	0.0035	1.008	mg/L	0.0035	0.35%
Na 589.592†	587906.2	49.17	mg/L	0.106	49.17	mg/L	0.106	0.21%
Na 330.237†	1429.9	52.40	mg/L	0.062	52.40	mg/L	0.062	0.12%
Ni 231.604†	3782.0	0.9861	mg/L	0.00288	0.9861	mg/L	0.00288	0.29%
Pb 220.353†	14878.4	1.951	mg/L	0.0054	1.951	mg/L	0.0054	0.28%
Sb 206.836†	6410.3	2.070	mg/L	0.0053	2.070	mg/L	0.0053	0.25%
Se 196.026†	2695.3	1.935	mg/L	0.0079	1.935	mg/L	0.0079	0.41%
Si 288.158†	4271.2	2.108	mg/L	0.0113	2.108	mg/L	0.0113	0.54%
Sn 189.927†	3708.4	1.012	mg/L	0.0030	1.012	mg/L	0.0030	0.29%
Sr 421.552†	848025.7	0.9667	mg/L	0.00058	0.9667	mg/L	0.00058	0.06%
Ti 334.903†	20218.4	1.037	mg/L	0.0015	1.037	mg/L	0.0015	0.15%
Tl 190.801†	4596.9	1.906	mg/L	0.0032	1.906	mg/L	0.0032	0.17%
V 292.402†	121194.7	0.9979	mg/L	0.00234	0.9979	mg/L	0.00234	0.23%
Zn 206.200†	3916.4	1.035	mg/L	0.0037	1.035	mg/L	0.0037	0.35%

Sequence No.: 14
Sample ID: CB 9
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 3:43:07 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2612606.6	104.2	%	0.12				0.11%
ScR 361.383	335716.3	103.2	%	0.15				0.15%
Ag 328.068†	4.9	0.00003	mg/L	0.000089	0.00003	mg/L	0.000089	301.07%
Al 308.215†	145.6	0.08616	mg/L	0.058536	0.08616	mg/L	0.058536	67.93%
As 188.979†	0.1	0.00012	mg/L	0.001365	0.00012	mg/L	0.001365	>999.9%
B 249.677†	9.5	0.00129	mg/L	0.000895	0.00129	mg/L	0.000895	69.18%
Ba 233.527†	8.7	0.00203	mg/L	0.001593	0.00203	mg/L	0.001593	78.64%
Be 313.042†	261.6	0.00041	mg/L	0.000262	0.00041	mg/L	0.000262	63.45%
Ca 317.933†	274.2	0.02058	mg/L	0.016048	0.02058	mg/L	0.016048	77.96%
Cd 228.802†	0.2	0.00001	mg/L	0.000127	0.00001	mg/L	0.000127	>999.9%
Co 228.616†	18.2	0.00055	mg/L	0.000128	0.00055	mg/L	0.000128	23.24%
Cr 267.716†	2.2	0.00038	mg/L	0.000368	0.00038	mg/L	0.000368	97.08%
Cu 324.752†	-122.2	-0.00050	mg/L	0.000113	-0.00050	mg/L	0.000113	22.43%
Fe 273.955†	165.0	0.1353	mg/L	0.06606	0.1353	mg/L	0.06606	48.83%
K 766.490†	-2.0	-0.00105	mg/L	0.024317	-0.00105	mg/L	0.024317	>999.9%
Mg 279.077†	47.1	0.03368	mg/L	0.013856	0.03368	mg/L	0.013856	41.13%
Mn 257.610†	239.9	0.00708	mg/L	0.003416	0.00708	mg/L	0.003416	48.26%
Mo 202.031†	13.5	0.00071	mg/L	0.000084	0.00071	mg/L	0.000084	11.78%
Na 589.592†	147.7	0.01236	mg/L	0.011229	0.01236	mg/L	0.011229	90.87%
Na 330.237†	4.5	0.1640	mg/L	0.20746	0.1640	mg/L	0.20746	126.50%
Ni 231.604†	6.1	0.00159	mg/L	0.000421	0.00159	mg/L	0.000421	26.47%
Pb 220.353†	1.7	0.00023	mg/L	0.000777	0.00023	mg/L	0.000777	332.90%
Sb 206.836†	15.0	0.00485	mg/L	0.000483	0.00485	mg/L	0.000483	9.97%
Se 196.026†	3.4	0.00244	mg/L	0.004255	0.00244	mg/L	0.004255	174.48%
Si 288.158†	2.3	0.00114	mg/L	0.002606	0.00114	mg/L	0.002606	228.39%
Sn 189.927†	0.9	0.00026	mg/L	0.000315	0.00026	mg/L	0.000315	119.65%
Sr 421.552†	621.1	0.00071	mg/L	0.000459	0.00071	mg/L	0.000459	64.85%
Ti 334.903†	64.1	0.00329	mg/L	0.001375	0.00329	mg/L	0.001375	41.79%
Tl 190.801†	2.0	0.00083	mg/L	0.001076	0.00083	mg/L	0.001076	129.64%
V 292.402†	20.6	0.00017	mg/L	0.000105	0.00017	mg/L	0.000105	63.61%
Zn 206.200†	5.6	0.00149	mg/L	0.000677	0.00149	mg/L	0.000677	45.50%

User canceled analysis.

Analysis Begun

Start Time: 11/15/2012 3:48:06 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/15/2012 7:19:27 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CB 10
Date Collected: 11/15/2012 3:48:07 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2586824.2	103.2	%	0.67				0.65%
ScR 361.383	335472.5	103.1	%	0.40				0.39%
Ag 328.068†	-40.8	-0.00025	mg/L	0.000134	-0.00025	mg/L	0.000134	54.78%
Al 308.215†	25.8	0.01527	mg/L	0.005483	0.01527	mg/L	0.005483	35.90%
As 188.979†	2.0	0.00118	mg/L	0.001684	0.00118	mg/L	0.001684	142.63%
B 249.677†	2.9	0.00039	mg/L	0.000248	0.00039	mg/L	0.000248	63.10%
Ba 233.527†	0.2	0.00006	mg/L	0.000655	0.00006	mg/L	0.000655	>999.9%
Be 313.042†	58.3	0.00009	mg/L	0.000068	0.00009	mg/L	0.000068	74.20%
Ca 317.933†	26.6	0.00199	mg/L	0.001600	0.00199	mg/L	0.001600	80.22%
Cd 228.802†	-3.1	-0.00011	mg/L	0.000205	-0.00011	mg/L	0.000205	181.30%
Co 228.616†	14.8	0.00045	mg/L	0.000087	0.00045	mg/L	0.000087	19.31%
Cr 267.716†	0.6	0.00009	mg/L	0.000125	0.00009	mg/L	0.000125	132.02%
Cu 324.752†	-145.8	-0.00061	mg/L	0.000125	-0.00061	mg/L	0.000125	20.57%
Fe 273.955†	18.7	0.01535	mg/L	0.005413	0.01535	mg/L	0.005413	35.26%
K 766.490†	-37.8	-0.02022	mg/L	0.016524	-0.02022	mg/L	0.016524	81.71%
Mg 279.077†	7.9	0.00564	mg/L	0.000906	0.00564	mg/L	0.000906	16.06%
Mn 257.610†	20.9	0.00062	mg/L	0.000174	0.00062	mg/L	0.000174	28.29%
Mo 202.031†	3.8	0.00020	mg/L	0.000195	0.00020	mg/L	0.000195	98.09%
Na 589.592†	-39.4	-0.00329	mg/L	0.001188	-0.00329	mg/L	0.001188	36.07%
Na 330.237†	0.6	0.02071	mg/L	0.152088	0.02071	mg/L	0.152088	734.52%
Ni 231.604†	-1.3	-0.00033	mg/L	0.002319	-0.00033	mg/L	0.002319	696.91%
Pb 220.353†	-1.2	-0.00015	mg/L	0.000125	-0.00015	mg/L	0.000125	83.27%
Sb 206.836†	6.6	0.00214	mg/L	0.002653	0.00214	mg/L	0.002653	123.99%
Se 196.026†	3.3	0.00234	mg/L	0.001808	0.00234	mg/L	0.001808	77.37%
Si 288.158†	-4.9	-0.00242	mg/L	0.002288	-0.00242	mg/L	0.002288	94.56%
Sn 189.927†	0.1	0.00004	mg/L	0.000365	0.00004	mg/L	0.000365	921.62%
Sr 421.552†	144.8	0.00017	mg/L	0.000012	0.00017	mg/L	0.000012	7.20%
Ti 334.903†	29.0	0.00149	mg/L	0.000343	0.00149	mg/L	0.000343	23.04%
Tl 190.801†	-1.1	-0.00046	mg/L	0.002546	-0.00046	mg/L	0.002546	557.87%
V 292.402†	-11.1	-0.00009	mg/L	0.000181	-0.00009	mg/L	0.000181	197.22%
Zn 206.200†	1.8	0.00048	mg/L	0.000370	0.00048	mg/L	0.000370	77.39%

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Analysis Begun

Start Time: 11/15/2012 3:53:38 PM **Plasma On Time: 11/15/2012 7:19:27 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\1115.sif
Batch ID:
Results Data Set: I2121115
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 352**
Sample ID: VR32 E SWC **Date Collected: 11/15/2012 3:53:40 PM**
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2618577.6	104.4	%	1.03				0.99%
ScR 361.383	341714.4	105.0	%	0.79				0.76%
Ag 328.068†	-367.8	-0.00210	mg/L	0.000093	-0.00420	mg/L	0.000186	4.44%
Al 308.215†	345941.3	204.8	mg/L	1.14	409.6	mg/L	2.28	0.56%
As 188.979†	-197.9	0.1473	mg/L	0.00449	0.2946	mg/L	0.00897	3.04%
B 249.677†	209.1	0.02832	mg/L	0.002222	0.05664	mg/L	0.004445	7.85%
Ba 233.527†	18208.8	4.252	mg/L	0.0572	8.504	mg/L	0.1144	1.35%
Be 313.042†	4989.5	0.00771	mg/L	0.000057	0.01541	mg/L	0.000113	0.74%
Ca 317.933†	840282.8	63.08	mg/L	0.504	126.2	mg/L	1.01	0.80%
Cd 228.802†	1293.6	0.04235	mg/L	0.000545	0.08470	mg/L	0.001090	1.29%
Co 228.616†	4275.3	0.1102	mg/L	0.00111	0.2204	mg/L	0.00223	1.01%
Cr 267.716†	3559.3	0.6096	mg/L	0.00521	1.219	mg/L	0.0104	0.85%
Cu 324.752†	50894.2	0.2193	mg/L	0.00178	0.4385	mg/L	0.00356	0.81%
Fe 273.955†	285774.9	234.4	mg/L	2.00	468.7	mg/L	3.99	0.85%
K 766.490†	52852.7	28.25	mg/L	0.128	56.49	mg/L	0.255	0.45%
Mg 279.077†	124353.7	88.96	mg/L	0.643	177.9	mg/L	1.29	0.72%
Mn 257.610†	483648.7	14.27	mg/L	0.108	28.54	mg/L	0.217	0.76%
Mo 202.031†	186.8	0.00913	mg/L	0.000124	0.01826	mg/L	0.000248	1.36%
Na 589.592†	18024.8	1.508	mg/L	0.0075	3.015	mg/L	0.0151	0.50%
Na 330.237†	-13.8	0.7416	mg/L	0.33862	1.483	mg/L	0.6772	45.66%
Ni 231.604†	1952.6	0.5090	mg/L	0.00256	1.018	mg/L	0.0051	0.50%
Pb 220.353†	12069.9	1.622	mg/L	0.0125	3.243	mg/L	0.0250	0.77%
Sb 206.836†	37.4	0.00864	mg/L	0.001248	0.01728	mg/L	0.002495	14.44%
Se 196.026†	28.7	0.02030	mg/L	0.001942	0.04061	mg/L	0.003884	9.57%
Si 288.158†	6419.6	3.181	mg/L	0.0534	6.362	mg/L	0.1068	1.68%
Sn 189.927†	-53.9	-0.00550	mg/L	0.000344	-0.01101	mg/L	0.000687	6.24%
Sr 421.552†	765645.8	0.8728	mg/L	0.00496	1.746	mg/L	0.0099	0.57%
Ti 334.903†	179614.0	9.217	mg/L	0.0610	18.43	mg/L	0.122	0.66%
Tl 190.801†	-48.0	0.00281	mg/L	0.002542	0.00561	mg/L	0.005083	90.55%
V 292.402†	46082.9	0.3691	mg/L	0.00302	0.7383	mg/L	0.00605	0.82%
Zn 206.200†	9745.0	2.575	mg/L	0.0350	5.150	mg/L	0.0701	1.36%

Sequence No.: 2
Sample ID: VR32 F SWC

Autosampler Location: 353
Date Collected: 11/15/2012 3:57:01 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR32 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2621392.0	104.5	%	0.57				0.55%
ScR 361.383	337153.0	103.6	%	0.93				0.90%
Ag 328.068†	-389.9	-0.00227	mg/L	0.000094	-0.00454	mg/L	0.000189	4.16%
Al 308.215†	254656.8	150.8	mg/L	1.24	301.5	mg/L	2.48	0.82%
As 188.979†	-29.6	0.1354	mg/L	0.00378	0.2707	mg/L	0.00756	2.79%
B 249.677†	137.5	0.01867	mg/L	0.000294	0.03734	mg/L	0.000588	1.57%
Ba 233.527†	12007.8	2.805	mg/L	0.0287	5.610	mg/L	0.0573	1.02%
Be 313.042†	2638.4	0.00406	mg/L	0.000044	0.00812	mg/L	0.000089	1.09%
Ca 317.933†	397525.2	29.84	mg/L	0.215	59.69	mg/L	0.430	0.72%
Cd 228.802†	510.8	0.01590	mg/L	0.000128	0.03179	mg/L	0.000255	0.80%
Co 228.616†	2050.9	0.05049	mg/L	0.000356	0.1010	mg/L	0.00071	0.70%
Cr 267.716†	865.5	0.1506	mg/L	0.00113	0.3012	mg/L	0.00225	0.75%
Cu 324.752†	23990.0	0.1050	mg/L	0.00093	0.2100	mg/L	0.00186	0.89%
Fe 273.955†	182879.8	150.0	mg/L	1.50	300.0	mg/L	3.00	1.00%
K 766.490†	20789.2	11.11	mg/L	0.064	22.22	mg/L	0.128	0.58%
Mg 279.077†	38184.8	27.27	mg/L	0.215	54.55	mg/L	0.429	0.79%
Mn 257.610†	339708.2	10.02	mg/L	0.088	20.04	mg/L	0.176	0.88%
Mo 202.031†	105.1	0.00521	mg/L	0.000168	0.01042	mg/L	0.000336	3.22%
Na 589.592†	20585.9	1.722	mg/L	0.0112	3.444	mg/L	0.0224	0.65%
Na 330.237†	24.0	1.694	mg/L	0.1092	3.387	mg/L	0.2185	6.45%
Ni 231.604†	421.3	0.1098	mg/L	0.00164	0.2197	mg/L	0.00328	1.49%
Pb 220.353†	5160.3	0.7062	mg/L	0.00505	1.412	mg/L	0.0101	0.72%
Sb 206.836†	21.1	0.00789	mg/L	0.001993	0.01578	mg/L	0.003985	25.26%
Se 196.026†	21.6	0.01532	mg/L	0.003720	0.03063	mg/L	0.007441	24.29%
Si 288.158†	11293.2	5.580	mg/L	0.0538	11.16	mg/L	0.108	0.96%
Sn 189.927†	-33.7	-0.00470	mg/L	0.001841	-0.00941	mg/L	0.003683	39.15%
Sr 421.552†	329823.6	0.3760	mg/L	0.00258	0.7520	mg/L	0.00516	0.69%
Ti 334.903†	104828.6	5.380	mg/L	0.0438	10.76	mg/L	0.088	0.81%
Tl 190.801†	-29.9	0.00236	mg/L	0.003208	0.00472	mg/L	0.006415	136.00%
V 292.402†	29411.3	0.2350	mg/L	0.00135	0.4699	mg/L	0.00270	0.57%
Zn 206.200†	4747.9	1.254	mg/L	0.0127	2.509	mg/L	0.0253	1.01%

Sequence No.: 3
Sample ID: VR32 G SWC

Autosampler Location: 354
Date Collected: 11/15/2012 4:01:04 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636602.6	105.1	%	0.49				0.47%
ScR 361.383	344423.6	105.9	%	0.50				0.48%
Ag 328.068†	-486.1	-0.00284	mg/L	0.000074	-0.00568	mg/L	0.000148	2.61%
Al 308.215†	282573.3	167.3	mg/L	0.60	334.6	mg/L	1.21	0.36%
As 188.979†	-171.6	0.07910	mg/L	0.001189	0.1582	mg/L	0.00238	1.50%
B 249.677†	103.5	0.01401	mg/L	0.000767	0.02802	mg/L	0.001533	5.47%
Ba 233.527†	9009.7	2.097	mg/L	0.0125	4.194	mg/L	0.0250	0.60%
Be 313.042†	2785.7	0.00427	mg/L	0.000051	0.00855	mg/L	0.000102	1.19%
Ca 317.933†	344368.5	25.85	mg/L	0.225	51.71	mg/L	0.451	0.87%
Cd 228.802†	221.4	0.00665	mg/L	0.000245	0.01329	mg/L	0.000490	3.69%
Co 228.616†	2183.2	0.05287	mg/L	0.000358	0.1057	mg/L	0.00072	0.68%
Cr 267.716†	906.1	0.1579	mg/L	0.00016	0.3159	mg/L	0.00033	0.10%
Cu 324.752†	23313.8	0.1024	mg/L	0.00035	0.2049	mg/L	0.00070	0.34%
Fe 273.955†	194364.5	159.4	mg/L	1.20	318.8	mg/L	2.39	0.75%
K 766.490†	17120.0	9.150	mg/L	0.0200	18.30	mg/L	0.040	0.22%
Mg 279.077†	40949.0	29.25	mg/L	0.216	58.50	mg/L	0.433	0.74%
Mn 257.610†	282711.3	8.340	mg/L	0.0599	16.68	mg/L	0.120	0.72%
Mo 202.031†	91.2	0.00452	mg/L	0.000721	0.00904	mg/L	0.001442	15.95%
Na 589.592†	18945.4	1.585	mg/L	0.0051	3.169	mg/L	0.0101	0.32%
Na 330.237†	5.9	1.364	mg/L	0.0381	2.727	mg/L	0.0761	2.79%
Ni 231.604†	463.4	0.1208	mg/L	0.00162	0.2416	mg/L	0.00324	1.34%
Pb 220.353†	3131.5	0.4439	mg/L	0.00242	0.8879	mg/L	0.00484	0.55%
Sb 206.836†	11.0	0.00505	mg/L	0.002388	0.01009	mg/L	0.004776	47.31%
Se 196.026†	19.2	0.01360	mg/L	0.002085	0.02719	mg/L	0.004169	15.33%
Si 288.158†	8269.7	4.087	mg/L	0.0327	8.174	mg/L	0.0655	0.80%
Sn 189.927†	-36.7	-0.00589	mg/L	0.000214	-0.01177	mg/L	0.000428	3.64%
Sr 421.552†	273181.2	0.3114	mg/L	0.00086	0.6228	mg/L	0.00172	0.28%
Ti 334.903†	121144.9	6.217	mg/L	0.0309	12.43	mg/L	0.062	0.50%
Tl 190.801†	-36.8	0.00033	mg/L	0.004625	0.00067	mg/L	0.009251	>999.9%
V 292.402†	34312.9	0.2741	mg/L	0.00019	0.5482	mg/L	0.00037	0.07%
Zn 206.200†	3067.2	0.8104	mg/L	0.00283	1.621	mg/L	0.0057	0.35%

Sequence No.: 4
Sample ID: VR32 H SWC

Autosampler Location: 355
Date Collected: 11/15/2012 4:04:50 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 H SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2632371.3	105.0	%	0.27				0.25%
ScR 361.383	342343.5	105.2	%	1.04				0.99%
Ag 328.068†	-446.4	-0.00261	mg/L	0.000126	-0.00522	mg/L	0.000251	4.81%
Al 308.215†	274142.8	162.3	mg/L	1.21	324.6	mg/L	2.42	0.75%
As 188.979†	-176.0	0.06333	mg/L	0.001028	0.1267	mg/L	0.00206	1.62%
B 249.677†	87.3	0.01180	mg/L	0.000661	0.02360	mg/L	0.001323	5.61%
Ba 233.527†	9995.5	2.330	mg/L	0.0241	4.660	mg/L	0.0483	1.04%
Be 313.042†	2747.8	0.00423	mg/L	0.000077	0.00846	mg/L	0.000155	1.83%
Ca 317.933†	302047.2	22.68	mg/L	0.191	45.35	mg/L	0.381	0.84%
Cd 228.802†	167.5	0.00488	mg/L	0.000114	0.00976	mg/L	0.000229	2.34%
Co 228.616†	2101.2	0.05129	mg/L	0.000292	0.1026	mg/L	0.00058	0.57%
Cr 267.716†	861.7	0.1505	mg/L	0.00134	0.3010	mg/L	0.00268	0.89%
Cu 324.752†	22148.8	0.09755	mg/L	0.000291	0.1951	mg/L	0.00058	0.30%
Fe 273.955†	189883.3	155.7	mg/L	0.91	311.4	mg/L	1.82	0.59%
K 766.490†	16787.9	8.972	mg/L	0.0758	17.94	mg/L	0.152	0.84%
Mg 279.077†	36157.7	25.82	mg/L	0.253	51.64	mg/L	0.506	0.98%
Mn 257.610†	293359.7	8.654	mg/L	0.0669	17.31	mg/L	0.134	0.77%
Mo 202.031†	93.4	0.00467	mg/L	0.000427	0.00934	mg/L	0.000854	9.14%
Na 589.592†	16996.0	1.422	mg/L	0.0167	2.843	mg/L	0.0335	1.18%
Na 330.237†	4.3	1.273	mg/L	0.1727	2.546	mg/L	0.3453	13.56%
Ni 231.604†	423.2	0.1103	mg/L	0.00088	0.2206	mg/L	0.00176	0.80%
Pb 220.353†	1334.3	0.2074	mg/L	0.00128	0.4148	mg/L	0.00257	0.62%
Sb 206.836†	11.5	0.00498	mg/L	0.002368	0.00997	mg/L	0.004736	47.53%
Se 196.026†	19.7	0.01395	mg/L	0.002474	0.02789	mg/L	0.004948	17.74%
Si 288.158†	5600.7	2.769	mg/L	0.0266	5.538	mg/L	0.0531	0.96%
Sn 189.927†	-35.9	-0.00613	mg/L	0.001566	-0.01226	mg/L	0.003131	25.53%
Sr 421.552†	251461.6	0.2866	mg/L	0.00239	0.5733	mg/L	0.00479	0.84%
Ti 334.903†	111945.8	5.745	mg/L	0.0415	11.49	mg/L	0.083	0.72%
Tl 190.801†	-32.5	0.00185	mg/L	0.002388	0.00371	mg/L	0.004777	128.76%
V 292.402†	30004.3	0.2392	mg/L	0.00112	0.4784	mg/L	0.00224	0.47%
Zn 206.200†	2205.3	0.5827	mg/L	0.00861	1.165	mg/L	0.0172	1.48%

Sequence No.: 5
Sample ID: VR32 I SWC

Autosampler Location: 356
Date Collected: 11/15/2012 4:08:52 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2626089.9	104.7	%	0.29				0.28%
ScR 361.383	343191.3	105.5	%	0.61				0.58%
Ag 328.068†	-483.2	-0.00282	mg/L	0.000034	-0.00564	mg/L	0.000067	1.19%
Al 308.215†	279744.0	165.6	mg/L	0.68	331.2	mg/L	1.35	0.41%
As 188.979†	-228.5	0.03537	mg/L	0.002147	0.07074	mg/L	0.004295	6.07%
B 249.677†	61.6	0.00827	mg/L	0.000227	0.01655	mg/L	0.000453	2.74%
Ba 233.527†	6018.4	1.390	mg/L	0.0071	2.780	mg/L	0.0141	0.51%
Be 313.042†	3018.1	0.00465	mg/L	0.000031	0.00929	mg/L	0.000062	0.66%
Ca 317.933†	295744.0	22.20	mg/L	0.107	44.41	mg/L	0.213	0.48%
Cd 228.802†	95.5	0.00252	mg/L	0.000053	0.00504	mg/L	0.000106	2.09%
Co 228.616†	2304.5	0.05731	mg/L	0.000424	0.1146	mg/L	0.00085	0.74%
Cr 267.716†	874.6	0.1536	mg/L	0.00033	0.3073	mg/L	0.00067	0.22%
Cu 324.752†	29859.6	0.1302	mg/L	0.00052	0.2604	mg/L	0.00105	0.40%
Fe 273.955†	207635.8	170.3	mg/L	0.59	340.6	mg/L	1.17	0.34%
K 766.490†	16074.6	8.591	mg/L	0.0660	17.18	mg/L	0.132	0.77%
Mg 279.077†	38902.8	27.78	mg/L	0.113	55.55	mg/L	0.226	0.41%
Mn 257.610†	102057.9	3.011	mg/L	0.0114	6.022	mg/L	0.0229	0.38%
Mo 202.031†	54.6	0.00263	mg/L	0.000497	0.00526	mg/L	0.000995	18.93%
Na 589.592†	17605.5	1.473	mg/L	0.0058	2.945	mg/L	0.0116	0.39%
Na 330.237†	-0.3	1.171	mg/L	0.1656	2.343	mg/L	0.3313	14.14%
Ni 231.604†	414.1	0.1079	mg/L	0.00127	0.2159	mg/L	0.00253	1.17%
Pb 220.353†	335.7	0.07672	mg/L	0.000205	0.1534	mg/L	0.00041	0.27%
Sb 206.836†	14.8	0.00621	mg/L	0.003354	0.01241	mg/L	0.006708	54.04%
Se 196.026†	15.2	0.01070	mg/L	0.002628	0.02139	mg/L	0.005255	24.57%
Si 288.158†	5679.9	2.808	mg/L	0.0249	5.616	mg/L	0.0499	0.89%
Sn 189.927†	-36.2	-0.00628	mg/L	0.000532	-0.01256	mg/L	0.001064	8.47%
Sr 421.552†	235134.0	0.2680	mg/L	0.00114	0.5361	mg/L	0.00227	0.42%
Ti 334.903†	113143.2	5.807	mg/L	0.0243	11.61	mg/L	0.049	0.42%
Tl 190.801†	-38.3	0.00084	mg/L	0.000223	0.00168	mg/L	0.000446	26.48%
V 292.402†	34917.6	0.2781	mg/L	0.00139	0.5562	mg/L	0.00278	0.50%
Zn 206.200†	1578.0	0.4169	mg/L	0.00165	0.8338	mg/L	0.00330	0.40%

Sequence No.: 6
Sample ID: VR32 J SWC

Autosampler Location: 357
Date Collected: 11/15/2012 4:12:54 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 J SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR32 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2660548.1	106.1	%	0.18				0.17%
ScR 361.383	342822.6	105.4	%	1.03				0.98%
Ag 328.068†	-479.0	-0.00280	mg/L	0.000255	-0.00559	mg/L	0.000509	9.11%
Al 308.215†	223825.4	132.5	mg/L	1.69	265.0	mg/L	3.38	1.27%
As 188.979†	-211.1	0.03343	mg/L	0.002894	0.06685	mg/L	0.005788	8.66%
B 249.677†	39.8	0.00531	mg/L	0.000341	0.01062	mg/L	0.000682	6.42%
Ba 233.527†	4359.9	1.003	mg/L	0.0115	2.006	mg/L	0.0229	1.14%
Be 313.042†	2225.9	0.00340	mg/L	0.000041	0.00680	mg/L	0.000081	1.20%
Ca 317.933†	244910.3	18.39	mg/L	0.283	36.77	mg/L	0.567	1.54%
Cd 228.802†	65.2	0.00167	mg/L	0.000187	0.00333	mg/L	0.000373	11.20%
Co 228.616†	2077.9	0.05149	mg/L	0.000105	0.1030	mg/L	0.00021	0.20%
Cr 267.716†	951.5	0.1660	mg/L	0.00102	0.3320	mg/L	0.00203	0.61%
Cu 324.752†	23838.4	0.1042	mg/L	0.00020	0.2085	mg/L	0.00041	0.19%
Fe 273.955†	179069.8	146.9	mg/L	1.81	293.7	mg/L	3.61	1.23%
K 766.490†	14545.0	7.773	mg/L	0.0879	15.55	mg/L	0.176	1.13%
Mg 279.077†	38212.2	27.29	mg/L	0.382	54.59	mg/L	0.764	1.40%
Mn 257.610†	90998.8	2.685	mg/L	0.0345	5.370	mg/L	0.0690	1.29%
Mo 202.031†	65.6	0.00325	mg/L	0.000123	0.00650	mg/L	0.000245	3.77%
Na 589.592†	14715.5	1.231	mg/L	0.0117	2.462	mg/L	0.0234	0.95%
Na 330.237†	0.9	1.146	mg/L	0.2652	2.293	mg/L	0.5304	23.14%
Ni 231.604†	426.2	0.1111	mg/L	0.00139	0.2222	mg/L	0.00278	1.25%
Pb 220.353†	371.0	0.07445	mg/L	0.001237	0.1489	mg/L	0.00247	1.66%
Sb 206.836†	11.4	0.00469	mg/L	0.003165	0.00939	mg/L	0.006329	67.40%
Se 196.026†	16.4	0.01162	mg/L	0.002347	0.02323	mg/L	0.004694	20.20%
Si 288.158†	8111.7	4.009	mg/L	0.0276	8.018	mg/L	0.0551	0.69%
Sn 189.927†	-22.1	-0.00296	mg/L	0.001454	-0.00591	mg/L	0.002908	49.20%
Sr 421.552†	186145.0	0.2122	mg/L	0.00252	0.4244	mg/L	0.00504	1.19%
Ti 334.903†	104965.5	5.387	mg/L	0.0724	10.77	mg/L	0.145	1.34%
Tl 190.801†	-38.3	-0.00160	mg/L	0.001866	-0.00320	mg/L	0.003732	116.70%
V 292.402†	33534.3	0.2678	mg/L	0.00090	0.5356	mg/L	0.00180	0.34%
Zn 206.200†	1275.0	0.3369	mg/L	0.00398	0.6737	mg/L	0.00795	1.18%

Sequence No.: 7
Sample ID: VR32 K SWC

Autosampler Location: 358
Date Collected: 11/15/2012 4:16:55 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR32 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2628987.2	104.8	%	0.30				0.29%
ScR 361.383	340808.6	104.8	%	1.76				1.68%
Ag 328.068†	-423.2	-0.00247	mg/L	0.000055	-0.00494	mg/L	0.000111	2.25%
Al 308.215†	191368.6	113.3	mg/L	2.22	226.6	mg/L	4.43	1.96%
As 188.979†	-66.0	0.08577	mg/L	0.003954	0.1715	mg/L	0.00791	4.61%
B 249.677†	86.3	0.01166	mg/L	0.000750	0.02332	mg/L	0.001500	6.43%
Ba 233.527†	11906.4	2.780	mg/L	0.0483	5.560	mg/L	0.0965	1.74%
Be 313.042†	2268.6	0.00349	mg/L	0.000086	0.00697	mg/L	0.000172	2.47%
Ca 317.933†	410563.8	30.82	mg/L	0.595	61.65	mg/L	1.190	1.93%
Cd 228.802†	754.3	0.02416	mg/L	0.000138	0.04832	mg/L	0.000275	0.57%
Co 228.616†	2247.3	0.05840	mg/L	0.000264	0.1168	mg/L	0.00053	0.45%
Cr 267.716†	1315.2	0.2275	mg/L	0.00340	0.4551	mg/L	0.00679	1.49%
Cu 324.752†	32390.7	0.1403	mg/L	0.00101	0.2807	mg/L	0.00202	0.72%
Fe 273.955†	190219.3	156.0	mg/L	3.18	312.0	mg/L	6.37	2.04%
K 766.490†	21664.2	11.58	mg/L	0.231	23.16	mg/L	0.462	1.99%
Mg 279.077†	49421.0	35.32	mg/L	0.693	70.64	mg/L	1.385	1.96%
Mn 257.610†	217426.3	6.415	mg/L	0.1333	12.83	mg/L	0.267	2.08%
Mo 202.031†	89.0	0.00435	mg/L	0.000399	0.00869	mg/L	0.000799	9.19%
Na 589.592†	13099.8	1.096	mg/L	0.0186	2.191	mg/L	0.0373	1.70%
Na 330.237†	12.3	1.002	mg/L	0.2786	2.005	mg/L	0.5572	27.79%
Ni 231.604†	495.5	0.1292	mg/L	0.00356	0.2583	mg/L	0.00711	2.75%
Pb 220.353†	7203.3	0.9647	mg/L	0.00417	1.929	mg/L	0.0083	0.43%
Sb 206.836†	27.9	0.00857	mg/L	0.003085	0.01714	mg/L	0.006171	36.00%
Se 196.026†	12.9	0.00907	mg/L	0.003706	0.01815	mg/L	0.007413	40.85%
Si 288.158†	11488.7	5.677	mg/L	0.1029	11.35	mg/L	0.206	1.81%
Sn 189.927†	-35.3	-0.00513	mg/L	0.000874	-0.01026	mg/L	0.001748	17.04%
Sr 421.552†	252292.3	0.2876	mg/L	0.00551	0.5752	mg/L	0.01102	1.92%
Ti 334.903†	85223.3	4.373	mg/L	0.0867	8.746	mg/L	0.1733	1.98%
Tl 190.801†	-32.2	0.00195	mg/L	0.001193	0.00390	mg/L	0.002385	61.23%
V 292.402†	30825.0	0.2467	mg/L	0.00171	0.4934	mg/L	0.00343	0.69%
Zn 206.200†	5106.5	1.349	mg/L	0.0215	2.698	mg/L	0.0430	1.59%

Sequence No.: 8
Sample ID: VR32 L SWC

Del

Dilution: 2.000000X

Autosampler Location: 359
Date Collected: 11/15/2012 4:20:56 PM
Data Type: Original

Nebulizer Parameters: VR32 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2639495.0	105.3	%	0.30				0.29%
ScR 361.383	332237.4	102.1	%	0.72				0.70%
Ag 328.068†	-250.2	-0.00139	mg/L	0.000032	-0.00279	mg/L	0.000063	2.27%
Al 308.215†	321499.3	190.3	mg/L	1.96	380.7	mg/L	3.93	1.03%
As 188.979†	-155.9	0.1896	mg/L	0.00248	0.3792	mg/L	0.00496	1.31%
B 249.677†	296.9	0.04011	mg/L	0.002116	0.08022	mg/L	0.004233	5.28%
Ba 233.527†	37433.4	8.762	mg/L	0.0672	17.52	mg/L	0.134	0.77%
Be 313.042†	4613.2	0.00710	mg/L	0.000098	0.01420	mg/L	0.000195	1.37%
Ca 317.933†	1936494.4	145.4	mg/L	1.93	290.8	mg/L	3.86	1.33%
Cd 228.802†	3615.8	0.1190	mg/L	0.00021	0.2381	mg/L	0.00043	0.18%
Co 228.616†	7343.2	0.2010	mg/L	0.00101	0.4020	mg/L	0.00201	0.50%
Cr 267.716†	5265.4	0.9030	mg/L	0.00359	1.806	mg/L	0.0072	0.40%
Cu 324.752†	116398.7	0.4967	mg/L	0.00124	0.9933	mg/L	0.00249	0.25%
Fe 273.955†	437178.2	358.5	mg/L	4.27	717.1	mg/L	8.54	1.19%
K 766.490†	79107.1	42.28	mg/L	0.399	84.56	mg/L	0.798	0.94%
Mg 279.077†	160321.7	114.7	mg/L	1.38	229.3	mg/L	2.77	1.21%
Mn 257.610†	803852.7	23.72	mg/L	0.282	47.43	mg/L	0.564	1.19%
Mo 202.031†	169.4	0.00731	mg/L	0.000355	0.01461	mg/L	0.000711	4.87%
Na 589.592†	10785.3	0.9021	mg/L	0.00673	1.804	mg/L	0.0135	0.75%
Na 330.237†	-3.1	0.1565	mg/L	0.23233	0.3131	mg/L	0.46467	148.42%
Ni 231.604†	2622.9	0.6837	mg/L	0.00190	1.367	mg/L	0.0038	0.28%
Pb 220.353†	33668.1	4.443	mg/L	0.0158	8.886	mg/L	0.0317	0.36%
Sb 206.836†	104.7	0.02657	mg/L	0.002442	0.05313	mg/L	0.004884	9.19%
Se 196.026†	18.4	0.01286	mg/L	0.006663	0.02572	mg/L	0.013325	51.81%
Si 288.158†	5811.3	2.884	mg/L	0.0252	5.768	mg/L	0.0504	0.87%
Sn 189.927†	-20.3	0.01404	mg/L	0.001962	0.02808	mg/L	0.003925	13.98%
Sr 421.552†	1069541.1	1.219	mg/L	0.0132	2.438	mg/L	0.0264	1.08%
Ti 334.903†	195718.1	10.04	mg/L	0.120	20.08	mg/L	0.240	1.20%
Tl 190.801†	-72.4	0.00534	mg/L	0.002760	0.01068	mg/L	0.005520	51.70%
V 292.402†	45495.7	0.3622	mg/L	0.00066	0.7244	mg/L	0.00132	0.18%
Zn 206.200†	23182.9	6.125	mg/L	0.0549	12.25	mg/L	0.110	0.90%

Sequence No.: 9
Sample ID: CV 9 10 FBA 11/16/12
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/15/2012 4:24:00 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2574943.1	102.7	%	0.38				0.37%
ScR 361.383	331797.9	102.0	%	0.53				0.52%
Ag 328.068†	167192.3	1.004	mg/L	0.0018	1.004	mg/L	0.0018	0.18%
Al 308.215†	3506.8	2.041	mg/L	0.0112	2.041	mg/L	0.0112	0.55%
As 188.979†	3532.0	2.026	mg/L	0.0101	2.026	mg/L	0.0101	0.50%
B 249.677†	7115.1	0.9713	mg/L	0.00461	0.9713	mg/L	0.00461	0.48%
Ba 233.527†	4416.1	1.040	mg/L	0.0036	1.040	mg/L	0.0036	0.35%
Be 313.042†	605195.6	0.9570	mg/L	0.00796	0.9570	mg/L	0.00796	0.83%
Ca 317.933†	26746.2	2.008	mg/L	0.0197	2.008	mg/L	0.0197	0.98%
Cd 228.802†	32046.9	1.062	mg/L	0.0012	1.062	mg/L	0.0012	0.12%
Co 228.616†	33914.6	1.041	mg/L	0.0002	1.041	mg/L	0.0002	0.02%
Cr 267.716†	6098.0	1.045	mg/L	0.0028	1.045	mg/L	0.0028	0.26%
Cu 324.752†	241741.1	1.004	mg/L	0.0009	1.004	mg/L	0.0009	0.09%
Fe 273.955†	2662.1	2.176	mg/L	0.0160	2.176	mg/L	0.0160	0.74%
K 766.490†	37538.7	20.06	mg/L	0.069	20.06	mg/L	0.069	0.34%
Mg 279.077†	2892.7	2.079	mg/L	0.0035	2.079	mg/L	0.0035	0.17%
Mn 257.610†	34620.4	1.022	mg/L	0.0098	1.022	mg/L	0.0098	0.96%
Mo 202.031†	19215.5	1.013	mg/L	0.0021	1.013	mg/L	0.0021	0.21%
Na 589.592†	587771.6	49.16	mg/L	0.376	49.16	mg/L	0.376	0.77%
Na 330.237†	1425.2	52.23	mg/L	0.210	52.23	mg/L	0.210	0.40%
Ni 231.604†	3797.2	0.9901	mg/L	0.00315	0.9901	mg/L	0.00315	0.32%
Pb 220.353†	14902.9	1.954	mg/L	0.0060	1.954	mg/L	0.0060	0.31%
Sb 206.836†	6623.1	2.139	mg/L	0.0093	2.139	mg/L	0.0093	0.43%
Se 196.026†	2762.0	1.982	mg/L	0.0112	1.982	mg/L	0.0112	0.57%
Si 288.158†	4268.2	2.107	mg/L	0.0157	2.107	mg/L	0.0157	0.74%
Sn 189.927†	3824.1	1.043	mg/L	0.0078	1.043	mg/L	0.0078	0.74%
Sr 421.552†	845374.5	0.9637	mg/L	0.00718	0.9637	mg/L	0.00718	0.75%
Ti 334.903†	20208.8	1.036	mg/L	0.0077	1.036	mg/L	0.0077	0.74%
Tl 190.801†	4744.6	1.967	mg/L	0.0063	1.967	mg/L	0.0063	0.32%
V 292.402†	127750.6	1.052	mg/L	0.0018	1.052	mg/L	0.0018	0.17%
Zn 206.200†	3923.6	1.036	mg/L	0.0013	1.036	mg/L	0.0013	0.13%

Sequence No.: 10
Sample ID: CB 11
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 4:29:08 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2573570.0	102.6	%	0.29				0.28%
ScR 361.383	333743.8	102.6	%	0.57				0.55%
Ag 328.068†	5.6	0.00003	mg/L	0.000093	0.00003	mg/L	0.000093	276.40%
Al 308.215†	24.5	0.01449	mg/L	0.012758	0.01449	mg/L	0.012758	88.05%
As 188.979†	1.8	0.00106	mg/L	0.002213	0.00106	mg/L	0.002213	207.95%
B 249.677†	9.5	0.00130	mg/L	0.001357	0.00130	mg/L	0.001357	104.51%
Ba 233.527†	1.2	0.00028	mg/L	0.000062	0.00028	mg/L	0.000062	22.23%
Be 313.042†	82.9	0.00013	mg/L	0.000013	0.00013	mg/L	0.000013	10.20%
Ca 317.933†	33.2	0.00249	mg/L	0.001493	0.00249	mg/L	0.001493	59.93%
Cd 228.802†	0.1	-0.00000	mg/L	0.000125	-0.00000	mg/L	0.000125	>999.9%
Co 228.616†	11.9	0.00036	mg/L	0.000186	0.00036	mg/L	0.000186	51.32%
Cr 267.716†	-3.1	-0.00053	mg/L	0.001158	-0.00053	mg/L	0.001158	218.01%
Cu 324.752†	-69.6	-0.00029	mg/L	0.000192	-0.00029	mg/L	0.000192	66.40%
Fe 273.955†	15.7	0.01291	mg/L	0.000446	0.01291	mg/L	0.000446	3.46%
K 766.490†	8.9	0.00475	mg/L	0.007274	0.00475	mg/L	0.007274	153.25%
Mg 279.077†	10.7	0.00765	mg/L	0.003992	0.00765	mg/L	0.003992	52.21%
Mn 257.610†	26.6	0.00078	mg/L	0.000087	0.00078	mg/L	0.000087	11.04%
Mo 202.031†	14.9	0.00079	mg/L	0.000327	0.00079	mg/L	0.000327	41.60%
Na 589.592†	-30.1	-0.00252	mg/L	0.000417	-0.00252	mg/L	0.000417	16.57%
Na 330.237†	21.9	0.8052	mg/L	0.15069	0.8052	mg/L	0.15069	18.71%
Ni 231.604†	-0.4	-0.00010	mg/L	0.001322	-0.00010	mg/L	0.001322	>999.9%
Pb 220.353†	1.4	0.00019	mg/L	0.000815	0.00019	mg/L	0.000815	438.73%
Sb 206.836†	9.6	0.00314	mg/L	0.000292	0.00314	mg/L	0.000292	9.32%
Se 196.026†	-3.8	-0.00271	mg/L	0.002878	-0.00271	mg/L	0.002878	106.17%
Si 288.158†	-3.6	-0.00177	mg/L	0.006173	-0.00177	mg/L	0.006173	348.74%
Sn 189.927†	6.4	0.00174	mg/L	0.000466	0.00174	mg/L	0.000466	26.75%
Sr 421.552†	150.9	0.00017	mg/L	0.000012	0.00017	mg/L	0.000012	6.87%
Ti 334.903†	39.0	0.00200	mg/L	0.000280	0.00200	mg/L	0.000280	14.02%
Tl 190.801†	-0.1	-0.00003	mg/L	0.001819	-0.00003	mg/L	0.001819	>999.9%
V 292.402†	5.6	0.00004	mg/L	0.000309	0.00004	mg/L	0.000309	728.28%
Zn 206.200†	0.8	0.00022	mg/L	0.000766	0.00022	mg/L	0.000766	352.95%

Sequence No.: 11
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/15/2012 4:33:24 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2585653.5	103.1	%	0.75				0.73%
ScR 361.383	331089.5	101.8	%	0.49				0.48%
Ag 328.068†	460.3	0.00277	mg/L	0.000253	0.00277	mg/L	0.000253	9.16%
Al 308.215†	78.9	0.04658	mg/L	0.004842	0.04658	mg/L	0.004842	10.39%
As 188.979†	86.6	0.04916	mg/L	0.001569	0.04916	mg/L	0.001569	3.19%
B 249.677†	149.4	0.02041	mg/L	0.000978	0.02041	mg/L	0.000978	4.79%
Ba 233.527†	14.2	0.00333	mg/L	0.000346	0.00333	mg/L	0.000346	10.39%
Be 313.042†	618.4	0.00098	mg/L	0.000031	0.00098	mg/L	0.000031	3.15%
Ca 317.933†	659.6	0.04952	mg/L	0.000997	0.04952	mg/L	0.000997	2.01%
Cd 228.802†	72.4	0.00211	mg/L	0.000084	0.00211	mg/L	0.000084	4.00%
Co 228.616†	127.6	0.00391	mg/L	0.000134	0.00391	mg/L	0.000134	3.42%
Cr 267.716†	27.6	0.00472	mg/L	0.000483	0.00472	mg/L	0.000483	10.23%
Cu 324.752†	430.1	0.00179	mg/L	0.000144	0.00179	mg/L	0.000144	8.08%
Fe 273.955†	71.5	0.05859	mg/L	0.001508	0.05859	mg/L	0.001508	2.57%
K 766.490†	902.9	0.4825	mg/L	0.01969	0.4825	mg/L	0.01969	4.08%
Mg 279.077†	77.5	0.05554	mg/L	0.002137	0.05554	mg/L	0.002137	3.85%
Mn 257.610†	42.8	0.00127	mg/L	0.000181	0.00127	mg/L	0.000181	14.27%
Mo 202.031†	104.9	0.00553	mg/L	0.000344	0.00553	mg/L	0.000344	6.22%
Na 589.592†	5610.7	0.4693	mg/L	0.00987	0.4693	mg/L	0.00987	2.10%
Na 330.237†	26.4	0.9657	mg/L	0.36153	0.9657	mg/L	0.36153	37.44%
Ni 231.604†	34.7	0.00904	mg/L	0.000976	0.00904	mg/L	0.000976	10.80%
Pb 220.353†	153.8	0.02017	mg/L	0.000571	0.02017	mg/L	0.000571	2.83%
Sb 206.836†	163.4	0.05282	mg/L	0.000523	0.05282	mg/L	0.000523	0.99%
Se 196.026†	70.1	0.05033	mg/L	0.002760	0.05033	mg/L	0.002760	5.48%
Si 288.158†	134.0	0.06613	mg/L	0.005087	0.06613	mg/L	0.005087	7.69%
Sn 189.927†	38.1	0.01041	mg/L	0.000949	0.01041	mg/L	0.000949	9.12%
Sr 421.552†	950.0	0.00108	mg/L	0.000036	0.00108	mg/L	0.000036	3.33%
Ti 334.903†	98.6	0.00505	mg/L	0.000478	0.00505	mg/L	0.000478	9.45%
Tl 190.801†	115.5	0.04808	mg/L	0.001209	0.04808	mg/L	0.001209	2.51%
V 292.402†	377.0	0.00311	mg/L	0.000234	0.00311	mg/L	0.000234	7.54%
Zn 206.200†	39.2	0.01037	mg/L	0.000649	0.01037	mg/L	0.000649	6.26%

Sequence No.: 12
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/15/2012 4:37:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2511522.2	100.1	%	0.69				0.69%
ScR 361.383	322753.7	99.20	%	0.694				0.70%
Ag 328.068†	-202.2	-0.00121	mg/L	0.000144	-0.00121	mg/L	0.000144	11.91%
Al 308.215†	336077.2	199.0	mg/L	2.03	199.0	mg/L	2.03	1.02%
As 188.979†	37.9	0.01580	mg/L	0.000463	0.01580	mg/L	0.000463	2.93%
B 249.677†	-15.2	-0.00208	mg/L	0.000623	-0.00208	mg/L	0.000623	29.94%
Ba 233.527†	135.1	-0.00107	mg/L	0.000380	-0.00107	mg/L	0.000380	35.47%
Be 313.042†	77.5	0.00012	mg/L	0.000010	0.00012	mg/L	0.000010	7.99%
Ca 317.933†	1342352.3	100.8	mg/L	1.28	100.8	mg/L	1.28	1.27%
Cd 228.802†	55.2	-0.00020	mg/L	0.000031	-0.00020	mg/L	0.000031	15.30%
Co 228.616†	77.8	-0.00024	mg/L	0.000121	-0.00024	mg/L	0.000121	51.01%
Cr 267.716†	6.7	-0.00099	mg/L	0.000726	-0.00099	mg/L	0.000726	73.25%
Cu 324.752†	-2044.7	-0.00050	mg/L	0.000247	-0.00050	mg/L	0.000247	48.99%
Fe 273.955†	245032.1	201.0	mg/L	2.18	201.0	mg/L	2.18	1.08%
K 766.490†	6.6	0.00351	mg/L	0.017819	0.00351	mg/L	0.017819	507.10%
Mg 279.077†	147088.9	105.3	mg/L	1.10	105.3	mg/L	1.10	1.04%
Mn 257.610†	25.6	0.00075	mg/L	0.000347	0.00075	mg/L	0.000347	46.02%
Mo 202.031†	49.0	0.00149	mg/L	0.000385	0.00149	mg/L	0.000385	25.81%
Na 589.592†	76.1	0.00637	mg/L	0.002238	0.00637	mg/L	0.002238	35.14%
Na 330.237†	-5.1	-0.1865	mg/L	0.12399	-0.1865	mg/L	0.12399	66.47%
Ni 231.604†	1.1	0.00030	mg/L	0.001224	0.00030	mg/L	0.001224	401.86%
Pb 220.353†	-284.3	0.00210	mg/L	0.000380	0.00210	mg/L	0.000380	18.05%
Sb 206.836†	23.9	0.00756	mg/L	0.002102	0.00756	mg/L	0.002102	27.81%
Se 196.026†	15.2	0.01093	mg/L	0.004042	0.01093	mg/L	0.004042	36.98%
Si 288.158†	-28.1	-0.00113	mg/L	0.001361	-0.00113	mg/L	0.001361	121.00%
Sn 189.927†	-73.1	-0.00746	mg/L	0.001051	-0.00746	mg/L	0.001051	14.10%
Sr 421.552†	3482.0	0.00397	mg/L	0.000073	0.00397	mg/L	0.000073	1.84%
Ti 334.903†	134.5	0.00209	mg/L	0.000410	0.00209	mg/L	0.000410	19.60%
Tl 190.801†	-56.7	-0.00218	mg/L	0.002259	-0.00218	mg/L	0.002259	103.67%
V 292.402†	1460.3	0.00495	mg/L	0.000105	0.00495	mg/L	0.000105	2.12%
Zn 206.200†	15.4	0.00406	mg/L	0.000768	0.00406	mg/L	0.000768	18.90%

Sequence No.: 13
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/15/2012 4:41:58 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2554939.9	101.9	%	0.29				0.28%
ScR 361.383	323589.9	99.46	%	0.997				1.00%
Ag 328.068†	160030.1	0.9612	mg/L	0.00225	0.9612	mg/L	0.00225	0.23%
Al 308.215†	334832.9	198.2	mg/L	2.11	198.2	mg/L	2.11	1.07%
As 188.979†	1776.8	1.0000	mg/L	0.00740	1.0000	mg/L	0.00740	0.74%
B 249.677†	-5.4	-0.00283	mg/L	0.000950	-0.00283	mg/L	0.000950	33.63%
Ba 233.527†	4521.1	1.032	mg/L	0.0140	1.032	mg/L	0.0140	1.35%
Be 313.042†	611578.2	0.9671	mg/L	0.01167	0.9671	mg/L	0.01167	1.21%
Ca 317.933†	1346783.6	101.1	mg/L	1.07	101.1	mg/L	1.07	1.06%
Cd 228.802†	30994.0	1.032	mg/L	0.0041	1.032	mg/L	0.0041	0.40%
Co 228.616†	33029.1	1.013	mg/L	0.0039	1.013	mg/L	0.0039	0.39%
Cr 267.716†	6118.8	1.047	mg/L	0.0144	1.047	mg/L	0.0144	1.37%
Cu 324.752†	245169.7	1.027	mg/L	0.0017	1.027	mg/L	0.0017	0.16%
Fe 273.955†	245667.3	201.5	mg/L	2.79	201.5	mg/L	2.79	1.39%
K 766.490†	-94.3	-0.05042	mg/L	0.016406	-0.05042	mg/L	0.016406	32.54%
Mg 279.077†	140216.4	100.3	mg/L	1.22	100.3	mg/L	1.22	1.22%
Mn 257.610†	34014.3	1.004	mg/L	0.0133	1.004	mg/L	0.0133	1.32%
Mo 202.031†	46.3	0.00129	mg/L	0.000330	0.00129	mg/L	0.000330	25.60%
Na 589.592†	215.5	0.01802	mg/L	0.000745	0.01802	mg/L	0.000745	4.13%
Na 330.237†	7.7	-0.03253	mg/L	0.157052	-0.03253	mg/L	0.157052	482.82%
Ni 231.604†	3692.3	0.9626	mg/L	0.01297	0.9626	mg/L	0.01297	1.35%
Pb 220.353†	6992.5	0.9560	mg/L	0.00377	0.9560	mg/L	0.00377	0.39%
Sb 206.836†	3167.7	1.012	mg/L	0.0034	1.012	mg/L	0.0034	0.34%
Se 196.026†	1375.7	0.9869	mg/L	0.00646	0.9869	mg/L	0.00646	0.66%
Si 288.158†	-35.9	-0.00183	mg/L	0.003190	-0.00183	mg/L	0.003190	174.58%
Sn 189.927†	-73.4	-0.00700	mg/L	0.000597	-0.00700	mg/L	0.000597	8.53%
Sr 421.552†	3452.8	0.00394	mg/L	0.000061	0.00394	mg/L	0.000061	1.55%
Ti 334.903†	132.6	0.00177	mg/L	0.000422	0.00177	mg/L	0.000422	23.83%
Tl 190.801†	2167.5	0.9146	mg/L	0.00722	0.9146	mg/L	0.00722	0.79%
V 292.402†	120176.3	0.9826	mg/L	0.00165	0.9826	mg/L	0.00165	0.17%
Zn 206.200†	3660.9	0.9672	mg/L	0.01326	0.9672	mg/L	0.01326	1.37%

Sequence No.: 14
Sample ID: CV 11

Autosampler Location: 7
Date Collected: 11/15/2012 4:45:47 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2583350.4	103.0	%	0.24				0.23%
ScR 361.383	327656.5	100.7	%	0.67				0.67%
Ag 328.068†	158681.2	0.9531	mg/L	0.00093	0.9531	mg/L	0.00093	0.10%
Al 308.215†	3486.0	2.029	mg/L	0.0192	2.029	mg/L	0.0192	0.95%
As 188.979†	3445.9	1.978	mg/L	0.0088	1.978	mg/L	0.0088	0.44%
B 249.677†	7043.0	0.9615	mg/L	0.01449	0.9615	mg/L	0.01449	1.51%
Ba 233.527†	4367.3	1.029	mg/L	0.0157	1.029	mg/L	0.0157	1.53%
Be 313.042†	606059.6	0.9584	mg/L	0.00863	0.9584	mg/L	0.00863	0.90%
Ca 317.933†	27861.5	2.092	mg/L	0.0306	2.092	mg/L	0.0306	1.47%
Cd 228.802†	31342.4	1.039	mg/L	0.0019	1.039	mg/L	0.0019	0.18%
Co 228.616†	33306.0	1.022	mg/L	0.0022	1.022	mg/L	0.0022	0.21%
Cr 267.716†	6019.3	1.031	mg/L	0.0131	1.031	mg/L	0.0131	1.27%
Cu 324.752†	242430.3	1.007	mg/L	0.0011	1.007	mg/L	0.0011	0.11%
Fe 273.955†	2618.6	2.141	mg/L	0.0308	2.141	mg/L	0.0308	1.44%
K 766.490†	37655.4	20.12	mg/L	0.140	20.12	mg/L	0.140	0.70%
Mg 279.077†	2849.5	2.048	mg/L	0.0243	2.048	mg/L	0.0243	1.18%
Mn 257.610†	35525.2	1.048	mg/L	0.0121	1.048	mg/L	0.0121	1.15%
Mo 202.031†	19314.5	1.018	mg/L	0.0014	1.018	mg/L	0.0014	0.14%
Na 589.592†	590664.0	49.40	mg/L	0.376	49.40	mg/L	0.376	0.76%
Na 330.237†	1410.8	51.71	mg/L	0.318	51.71	mg/L	0.318	0.62%
Ni 231.604†	3757.3	0.9797	mg/L	0.01293	0.9797	mg/L	0.01293	1.32%
Pb 220.353†	15005.7	1.967	mg/L	0.0090	1.967	mg/L	0.0090	0.46%
Sb 206.836†	6479.1	2.092	mg/L	0.0111	2.092	mg/L	0.0111	0.53%
Se 196.026†	2699.9	1.938	mg/L	0.0094	1.938	mg/L	0.0094	0.48%
Si 288.158†	4226.4	2.086	mg/L	0.0272	2.086	mg/L	0.0272	1.30%
Sn 189.927†	3727.8	1.017	mg/L	0.0034	1.017	mg/L	0.0034	0.33%
Sr 421.552†	849001.9	0.9678	mg/L	0.00951	0.9678	mg/L	0.00951	0.98%
Ti 334.903†	20782.9	1.066	mg/L	0.0118	1.066	mg/L	0.0118	1.11%
Tl 190.801†	4649.0	1.927	mg/L	0.0095	1.927	mg/L	0.0095	0.49%
V 292.402†	122759.9	1.011	mg/L	0.0022	1.011	mg/L	0.0022	0.22%
Zn 206.200†	3881.6	1.025	mg/L	0.0151	1.025	mg/L	0.0151	1.48%

Sequence No.: 15
Sample ID: CB 12
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/15/2012 4:49:54 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2562025.3	102.2	%	0.50				0.49%
ScR 361.383	330692.8	101.6	%	1.16				1.14%
Ag 328.068†	-49.2	-0.00030	mg/L	0.000323	-0.00030	mg/L	0.000323	109.28%
Al 308.215†	6.6	0.00391	mg/L	0.015366	0.00391	mg/L	0.015366	393.32%
As 188.979†	3.9	0.00222	mg/L	0.001436	0.00222	mg/L	0.001436	64.61%
B 249.677†	12.1	0.00165	mg/L	0.000992	0.00165	mg/L	0.000992	60.02%
Ba 233.527†	-2.2	-0.00051	mg/L	0.000297	-0.00051	mg/L	0.000297	58.37%
Be 313.042†	93.3	0.00015	mg/L	0.000045	0.00015	mg/L	0.000045	30.79%
Ca 317.933†	41.9	0.00315	mg/L	0.000392	0.00315	mg/L	0.000392	12.46%
Cd 228.802†	2.2	0.00006	mg/L	0.000177	0.00006	mg/L	0.000177	303.42%
Co 228.616†	10.0	0.00030	mg/L	0.000089	0.00030	mg/L	0.000089	29.44%
Cr 267.716†	-2.4	-0.00041	mg/L	0.001141	-0.00041	mg/L	0.001141	275.92%
Cu 324.752†	-80.9	-0.00034	mg/L	0.000103	-0.00034	mg/L	0.000103	30.52%
Fe 273.955†	13.6	0.01113	mg/L	0.005000	0.01113	mg/L	0.005000	44.92%
K 766.490†	2.1	0.00112	mg/L	0.020011	0.00112	mg/L	0.020011	>999.9%
Mg 279.077†	10.0	0.00718	mg/L	0.007735	0.00718	mg/L	0.007735	107.67%
Mn 257.610†	6.1	0.00018	mg/L	0.000092	0.00018	mg/L	0.000092	51.09%
Mo 202.031†	17.1	0.00090	mg/L	0.000169	0.00090	mg/L	0.000169	18.67%
Na 589.592†	-50.2	-0.00420	mg/L	0.002792	-0.00420	mg/L	0.002792	66.50%
Na 330.237†	0.6	0.02217	mg/L	0.519125	0.02217	mg/L	0.519125	>999.9%
Ni 231.604†	-5.2	-0.00135	mg/L	0.000997	-0.00135	mg/L	0.000997	73.95%
Pb 220.353†	7.8	0.00102	mg/L	0.000640	0.00102	mg/L	0.000640	62.76%
Sb 206.836†	13.3	0.00431	mg/L	0.000982	0.00431	mg/L	0.000982	22.81%
Se 196.026†	1.2	0.00088	mg/L	0.002489	0.00088	mg/L	0.002489	284.18%
Si 288.158†	0.2	0.00009	mg/L	0.003593	0.00009	mg/L	0.003593	>999.9%
Sn 189.927†	-0.6	-0.00017	mg/L	0.001220	-0.00017	mg/L	0.001220	722.55%
Sr 421.552†	168.2	0.00019	mg/L	0.000044	0.00019	mg/L	0.000044	23.03%
Ti 334.903†	26.3	0.00135	mg/L	0.000848	0.00135	mg/L	0.000848	62.89%
Tl 190.801†	1.0	0.00043	mg/L	0.002179	0.00043	mg/L	0.002179	507.47%
V 292.402†	-12.5	-0.00011	mg/L	0.000119	-0.00011	mg/L	0.000119	113.34%
Zn 206.200†	2.8	0.00073	mg/L	0.000563	0.00073	mg/L	0.000563	77.36%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-16-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Insufficient volume
		3			2991-5
		4			-6
		5			-7
		2			-4
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VR30 B	SWC	5	
		D			
		E			
		F			
		G			
		H			
		CCV2			
		CCB2			
		VR32 A-L	SWC	25 ✓	
		A		5	
		ADUP		✓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 2 of 6

All corrections made by analyst unless otherwise noted. BA 11-16-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR32 ASPK	SWC	5	Al Ba Fe Mn STL
		~~APOST~~			0.08 mL ICP Spike 2077-9 Mi-20
		L			
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End VR30, 32
—	✓	VR34 MB1	SWC	2	
	✓	B		5	
	✓	C			
	✓	D			
	✓	~~ZZZZZZ~~ AL		25	
	✓	A	BA	5	11/20/12
	✓	ADUP			
	✓	ASPK			
	✓	~~ZZZZZZ~~ ~~APOST~~			0.08 mL ICP Spike 2077-9
	✓	MB1SPK		2	
		CCV5			Ba, Co, Fe, Mg, Na, 330 Si ↑
		CCB5			~35 min delay
		CCV6			
		CCB6			

VR32 00219

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-16-12

ICP-2	Analyst BA 11-20-12	Peer HH 11-20	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See log
Internal Standards	✓	✓	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See log - VR34, VR33
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	See log - VR36
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	~~CAF - VR34, VR33~~ A.N. - VR33, VR36

==========

Analysis Begun

Start Time: 11/16/2012 8:40:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/16/2012 8:40:14 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2257192.3	5062.38	0.22%	100.0	%
ScR 361.383	285929.2	1391.38	0.49%	100.0	%
Ag 328.068†	-156.2	13.31	8.52%	[0.00]	mg/L
Al 308.215†	147.1	12.17	8.28%	[0.00]	mg/L
As 188.979†	-9.5	1.63	17.14%	[0.00]	mg/L
B 249.677†	40.2	10.66	26.54%	[0.00]	mg/L
Ba 233.527†	19.9	6.07	30.52%	[0.00]	mg/L
Be 313.042†	905.1	35.52	3.92%	[0.00]	mg/L
Ca 317.933†	161.6	10.52	6.51%	[0.00]	mg/L
Cd 228.802†	303.7	1.47	0.48%	[0.00]	mg/L
Co 228.616†	-63.9	0.59	0.92%	[0.00]	mg/L
Cr 267.716†	-81.8	5.34	6.52%	[0.00]	mg/L
Cu 324.752†	2486.2	26.59	1.07%	[0.00]	mg/L
Fe 273.955†	14.2	2.43	17.08%	[0.00]	mg/L
K 766.490†	498.6	23.15	4.64%	[0.00]	mg/L
Mg 279.077†	83.4	7.46	8.95%	[0.00]	mg/L
Mn 257.610†	157.9	1.11	0.71%	[0.00]	mg/L
Mo 202.031†	66.0	0.64	0.97%	[0.00]	mg/L
Na 589.592†	-326.9	3.37	1.03%	[0.00]	mg/L
Na 330.237†	-205.1	3.78	1.84%	[0.00]	mg/L
Ni 231.604†	-23.4	4.31	18.37%	[0.00]	mg/L
Pb 220.353†	62.2	0.92	1.47%	[0.00]	mg/L
Sb 206.836†	64.7	1.51	2.33%	[0.00]	mg/L
Se 196.026†	-53.9	5.80	10.77%	[0.00]	mg/L
Si 288.158†	61.1	6.41	10.48%	[0.00]	mg/L
Sn 189.927†	0.6	3.59	648.11%	[0.00]	mg/L
Sr 421.552†	398.0	32.76	8.23%	[0.00]	mg/L
Ti 334.903†	-53.4	5.15	9.65%	[0.00]	mg/L
Tl 190.801†	-42.6	0.94	2.21%	[0.00]	mg/L
V 292.402†	180.2	30.85	17.12%	[0.00]	mg/L
Zn 206.200†	26.6	1.80	6.77%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 11/16/2012 8:44:35 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	5162065.8	309107.01	5.99%	228.7	%
ScR 361.383	753266.5	90956.28	12.07%	263.4	%
Ba 233.527†	1874.1	1447.51	77.24%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cd 228.802†	33927.3	6109.66	18.01%	[10]	mg/L
Co 228.616†	36364.7	6783.73	18.65%	[10]	mg/L
Cr 267.716†	2462.0	1761.76	71.56%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cu 324.752†	249596.2	35377.75	14.17%	[10]	mg/L
Saturated within auto integration window (code 4)					
Mn 257.610†	3225.8	1401.70	43.45%	[10]	mg/L
Saturated within auto integration window (code 4)					
V 292.402†	138697.0	25356.30	18.28%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/16/2012 8:47:36 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2240434.6	11749.05	0.52%	99.26	%
ScR 361.383	278574.0	2167.99	0.78%	97.43	%
Ag 328.068†	176715.6	981.09	0.56%	[1.0]	mg/L
As 188.979†	18889.0	102.99	0.55%	[10]	mg/L
B 249.677†	78359.9	959.17	1.22%	[10]	mg/L
Be 313.042†	3325157.8	9039.91	0.27%	[5.0]	mg/L
Na 589.592†	637056.8	3225.78	0.51%	[50]	mg/L
Ni 231.604†	41213.5	479.43	1.16%	[10]	mg/L
Pb 220.353†	80014.5	352.48	0.44%	[10]	mg/L
Se 196.026†	14888.7	66.03	0.44%	[10]	mg/L
Sr 421.552†	4683748.6	13846.00	0.30%	[5]	mg/L
Tl 190.801†	25566.5	125.79	0.49%	[10]	mg/L
Zn 206.200†	40539.2	432.89	1.07%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/16/2012 8:50:10 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2284080.4	20514.72	0.90%	101.2	%
ScR 361.383	287209.0	4271.56	1.49%	100.4	%
Mo 202.031†	200666.8	1788.12	0.89%	[10]	mg/L
Sb 206.836†	32698.0	176.84	0.54%	[10]	mg/L
Si 288.158†	21523.3	356.61	1.66%	[10]	mg/L
Sn 189.927†	38978.7	378.05	0.97%	[10]	mg/L
Ti 334.903†	208410.1	4234.27	2.03%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 11/16/2012 8:52:25 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2129515.1	15926.23	0.75%	94.34	%
ScR 361.383	283261.8	4479.15	1.58%	99.07	%
Al 308.215†	53425.5	1062.08	1.99%	[30]	mg/L
Ca 317.933†	426118.0	3161.77	0.74%	[30]	mg/L
Fe 273.955†	131112.8	857.59	0.65%	[100]	mg/L
K 766.490†	199317.4	2014.88	1.01%	[100]	mg/L
Mg 279.077†	44239.4	880.98	1.99%	[30]	mg/L
Na 330.237†	2873.6	54.15	1.88%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	176700	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1781	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1889	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7836	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	187.4	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	665000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14200	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	3393	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	3636	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	246.2	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	24960	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1311	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1993	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1475	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	322.6	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20070	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12740	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.74	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4121	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8001	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3270	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1489	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2152	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3898	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	936700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	20840	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2557	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	13870	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4054	0.00000	1.000000	

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Analysis Begun

Start Time: 11/16/2012 9:03:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: STD2
Date Collected: 11/16/2012 9:03:34 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2234101.3	25048.88	1.12%	98.98	%
ScR 361.383	281040.0	8376.44	2.98%	98.29	%
Ba 233.527†	45364.6	2015.40	4.44%	[10]	mg/L
Cd 228.802†	316786.9	4140.20	1.31%	[10]	mg/L
Co 228.616†	352595.3	5111.49	1.45%	[10]	mg/L
Cr 267.716†	62110.4	2667.07	4.29%	[10]	mg/L
Cu 324.752†	2600465.7	38628.72	1.49%	[10]	mg/L
Mn 257.610†	361794.3	15460.11	4.27%	[10]	mg/L
V 292.402†	1309618.0	17838.14	1.36%	[10]	mg/L

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Analysis Begun

Start Time: 11/16/2012 9:05:19 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 11/16/2012 9:05:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2209684.8	97.90	%	0.341				0.35%
ScR 361.383	282108.1	98.66	%	1.030				1.04%
Ag 328.068†	171195.3	0.9690	mg/L	0.00334	0.9690	mg/L	0.00334	0.34%
Al 308.215†	3611.7	1.994	mg/L	0.0285	1.994	mg/L	0.0285	1.43%
As 188.979†	3613.4	1.937	mg/L	0.0091	1.937	mg/L	0.0091	0.47%
B 249.677†	7493.5	0.9554	mg/L	0.00947	0.9554	mg/L	0.00947	0.99%
Ba 233.527†	4623.1	1.019	mg/L	0.0129	1.019	mg/L	0.0129	1.27%
Be 313.042†	622301.4	0.9355	mg/L	0.01462	0.9355	mg/L	0.01462	1.56%
Ca 317.933†	27114.7	1.909	mg/L	0.0255	1.909	mg/L	0.0255	1.34%
Cd 228.802†	32872.5	1.026	mg/L	0.0051	1.026	mg/L	0.0051	0.50%
Co 228.616†	36272.9	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Cr 267.716†	6298.6	1.014	mg/L	0.0094	1.014	mg/L	0.0094	0.93%
Cu 324.752†	260661.1	1.002	mg/L	0.0035	1.002	mg/L	0.0035	0.35%
Fe 273.955†	2632.3	2.001	mg/L	0.0211	2.001	mg/L	0.0211	1.06%
K 766.490†	39267.6	19.70	mg/L	0.308	19.70	mg/L	0.308	1.56%
Mg 279.077†	2926.1	1.992	mg/L	0.0206	1.992	mg/L	0.0206	1.04%
Mn 257.610†	35565.1	0.9834	mg/L	0.01313	0.9834	mg/L	0.01313	1.33%
Mo 202.031†	20424.2	1.018	mg/L	0.0045	1.018	mg/L	0.0045	0.44%
Na 589.592†	619490.6	48.62	mg/L	0.591	48.62	mg/L	0.591	1.22%
Na 330.237†	1485.5	51.60	mg/L	0.574	51.60	mg/L	0.574	1.11%
Ni 231.604†	3941.7	0.9567	mg/L	0.00964	0.9567	mg/L	0.00964	1.01%
Pb 220.353†	15806.7	1.977	mg/L	0.0055	1.977	mg/L	0.0055	0.28%
Sb 206.836†	6859.5	2.097	mg/L	0.0069	2.097	mg/L	0.0069	0.33%
Se 196.026†	2843.4	1.909	mg/L	0.0148	1.909	mg/L	0.0148	0.77%
Si 288.158†	4441.4	2.063	mg/L	0.0250	2.063	mg/L	0.0250	1.21%
Sn 189.927†	3882.0	0.9973	mg/L	0.00242	0.9973	mg/L	0.00242	0.24%
Sr 421.552†	889172.4	0.9492	mg/L	0.01240	0.9492	mg/L	0.01240	1.31%
Ti 334.903†	20989.1	1.006	mg/L	0.0138	1.006	mg/L	0.0138	1.37%
Tl 190.801†	4946.7	1.927	mg/L	0.0082	1.927	mg/L	0.0082	0.42%
V 292.402†	130561.3	1.001	mg/L	0.0042	1.001	mg/L	0.0042	0.42%
Zn 206.200†	3966.6	0.9782	mg/L	0.01019	0.9782	mg/L	0.01019	1.04%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/16/2012 9:09:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2196753.1	97.32	%	0.645				0.66%
ScR 361.383	277079.3	96.90	%	0.596				0.62%
Ag 328.068†	25.3	0.00014	mg/L	0.000119	0.00014	mg/L	0.000119	83.25%
Al 308.215†	11.8	0.00663	mg/L	0.004874	0.00663	mg/L	0.004874	73.52%
As 188.979†	-2.4	-0.00130	mg/L	0.000877	-0.00130	mg/L	0.000877	67.73%
B 249.677†	20.4	0.00260	mg/L	0.000693	0.00260	mg/L	0.000693	26.66%
Ba 233.527†	-1.6	-0.00036	mg/L	0.000345	-0.00036	mg/L	0.000345	96.09%
Be 313.042†	140.9	0.00021	mg/L	0.000063	0.00021	mg/L	0.000063	29.60%
Ca 317.933†	4.1	0.00029	mg/L	0.000613	0.00029	mg/L	0.000613	209.76%
Cd 228.802†	-4.1	-0.00012	mg/L	0.000133	-0.00012	mg/L	0.000133	109.62%
Co 228.616†	-13.1	-0.00037	mg/L	0.000080	-0.00037	mg/L	0.000080	21.59%
Cr 267.716†	-1.9	-0.00030	mg/L	0.000789	-0.00030	mg/L	0.000789	263.58%
Cu 324.752†	73.5	0.00028	mg/L	0.000129	0.00028	mg/L	0.000129	45.76%
Fe 273.955†	2.6	0.00199	mg/L	0.000852	0.00199	mg/L	0.000852	42.89%
K 766.490†	40.7	0.02043	mg/L	0.010112	0.02043	mg/L	0.010112	49.51%
Mg 279.077†	6.7	0.00456	mg/L	0.002283	0.00456	mg/L	0.002283	50.03%
Mn 257.610†	0.2	0.00001	mg/L	0.000163	0.00001	mg/L	0.000163	>999.9%
Mo 202.031†	20.7	0.00103	mg/L	0.000105	0.00103	mg/L	0.000105	10.18%
Na 589.592†	146.5	0.01150	mg/L	0.003439	0.01150	mg/L	0.003439	29.92%
Na 330.237†	-7.5	-0.2613	mg/L	0.47250	-0.2613	mg/L	0.47250	180.80%
Ni 231.604†	-8.7	-0.00212	mg/L	0.001223	-0.00212	mg/L	0.001223	57.68%
Pb 220.353†	3.0	0.00037	mg/L	0.000277	0.00037	mg/L	0.000277	75.11%
Sb 206.836†	7.4	0.00227	mg/L	0.001134	0.00227	mg/L	0.001134	49.84%
Se 196.026†	7.0	0.00472	mg/L	0.002402	0.00472	mg/L	0.002402	50.90%
Si 288.158†	3.5	0.00165	mg/L	0.002627	0.00165	mg/L	0.002627	159.46%
Sn 189.927†	-2.5	-0.00063	mg/L	0.000777	-0.00063	mg/L	0.000777	123.08%
Sr 421.552†	134.3	0.00014	mg/L	0.000071	0.00014	mg/L	0.000071	49.43%
Ti 334.903†	-3.6	-0.00017	mg/L	0.000923	-0.00017	mg/L	0.000923	527.60%
Tl 190.801†	-0.9	-0.00037	mg/L	0.001500	-0.00037	mg/L	0.001500	408.38%
V 292.402†	-13.9	-0.00011	mg/L	0.000253	-0.00011	mg/L	0.000253	236.98%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000096	-0.00012	mg/L	0.000096	80.81%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 9:13:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2216218.3	98.18	%	0.984				1.00%
ScR 361.383	282613.9	98.84	%	1.028				1.04%
Ag 328.068†	537.3	0.00304	mg/L	0.000179	0.00304	mg/L	0.000179	5.90%
Al 308.215†	108.1	0.06056	mg/L	0.008648	0.06056	mg/L	0.008648	14.28%
As 188.979†	87.4	0.04638	mg/L	0.000615	0.04638	mg/L	0.000615	1.33%
B 249.677†	161.3	0.02058	mg/L	0.000219	0.02058	mg/L	0.000219	1.07%
Ba 233.527†	10.4	0.00228	mg/L	0.001457	0.00228	mg/L	0.001457	64.02%
Be 313.042†	676.8	0.00102	mg/L	0.000033	0.00102	mg/L	0.000033	3.26%
Ca 317.933†	680.4	0.04791	mg/L	0.000586	0.04791	mg/L	0.000586	1.22%
Cd 228.802†	68.8	0.00187	mg/L	0.000023	0.00187	mg/L	0.000023	1.24%
Co 228.616†	104.8	0.00296	mg/L	0.000186	0.00296	mg/L	0.000186	6.27%
Cr 267.716†	27.8	0.00447	mg/L	0.000689	0.00447	mg/L	0.000689	15.42%
Cu 324.752†	541.8	0.00208	mg/L	0.000042	0.00208	mg/L	0.000042	2.04%
Fe 273.955†	70.8	0.05399	mg/L	0.001502	0.05399	mg/L	0.001502	2.78%
K 766.490†	998.9	0.5011	mg/L	0.00548	0.5011	mg/L	0.00548	1.09%
Mg 279.077†	80.8	0.05479	mg/L	0.002742	0.05479	mg/L	0.002742	5.00%
Mn 257.610†	31.1	0.00086	mg/L	0.000036	0.00086	mg/L	0.000036	4.23%
Mo 202.031†	104.7	0.00522	mg/L	0.000094	0.00522	mg/L	0.000094	1.80%
Na 589.592†	6003.1	0.4712	mg/L	0.00187	0.4712	mg/L	0.00187	0.40%
Na 330.237†	7.0	0.2434	mg/L	0.08368	0.2434	mg/L	0.08368	34.38%
Ni 231.604†	38.7	0.00941	mg/L	0.000812	0.00941	mg/L	0.000812	8.63%
Pb 220.353†	159.1	0.01990	mg/L	0.000201	0.01990	mg/L	0.000201	1.01%
Sb 206.836†	174.7	0.05345	mg/L	0.001079	0.05345	mg/L	0.001079	2.02%
Se 196.026†	76.9	0.05167	mg/L	0.002389	0.05167	mg/L	0.002389	4.62%
Si 288.158†	139.0	0.06454	mg/L	0.003275	0.06454	mg/L	0.003275	5.07%
Sn 189.927†	32.9	0.00847	mg/L	0.001308	0.00847	mg/L	0.001308	15.43%
Sr 421.552†	944.7	0.00101	mg/L	0.000032	0.00101	mg/L	0.000032	3.17%
Ti 334.903†	115.1	0.00551	mg/L	0.000574	0.00551	mg/L	0.000574	10.41%
Tl 190.801†	123.3	0.04819	mg/L	0.000503	0.04819	mg/L	0.000503	1.04%
V 292.402†	377.1	0.00290	mg/L	0.000117	0.00290	mg/L	0.000117	4.03%
Zn 206.200†	37.8	0.00931	mg/L	0.000286	0.00931	mg/L	0.000286	3.07%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 9:17:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190631.7	97.05	%	0.522				0.54%
ScR 361.383	272122.2	95.17	%	0.790				0.83%
Ag 328.068†	-126.8	-0.00071	mg/L	0.000216	-0.00071	mg/L	0.000216	30.24%
Al 308.215†	354369.7	199.0	mg/L	1.93	199.0	mg/L	1.93	0.97%
As 188.979†	37.4	0.01434	mg/L	0.004842	0.01434	mg/L	0.004842	33.76%
B 249.677†	-4.5	-0.00057	mg/L	0.001157	-0.00057	mg/L	0.001157	201.74%
Ba 233.527†	134.4	-0.00180	mg/L	0.001640	-0.00180	mg/L	0.001640	91.02%
Be 313.042†	120.9	0.00018	mg/L	0.000016	0.00018	mg/L	0.000016	8.99%
Ca 317.933†	1386218.1	97.59	mg/L	1.338	97.59	mg/L	1.338	1.37%
Cd 228.802†	52.6	-0.00030	mg/L	0.000127	-0.00030	mg/L	0.000127	42.56%
Co 228.616†	59.7	-0.00082	mg/L	0.000211	-0.00082	mg/L	0.000211	25.75%
Cr 267.716†	-0.1	-0.00223	mg/L	0.000855	-0.00223	mg/L	0.000855	38.27%
Cu 324.752†	-2019.9	-0.00015	mg/L	0.000123	-0.00015	mg/L	0.000123	83.50%
Fe 273.955†	251658.1	191.9	mg/L	1.82	191.9	mg/L	1.82	0.95%
K 766.490†	15.3	0.00769	mg/L	0.016333	0.00769	mg/L	0.016333	212.48%
Mg 279.077†	151274.0	102.5	mg/L	1.20	102.5	mg/L	1.20	1.17%
Mn 257.610†	20.7	0.00051	mg/L	0.000176	0.00051	mg/L	0.000176	34.16%
Mo 202.031†	46.0	0.00124	mg/L	0.000303	0.00124	mg/L	0.000303	24.42%
Na 589.592†	208.1	0.01633	mg/L	0.001390	0.01633	mg/L	0.001390	8.51%
Na 330.237†	-19.8	-0.6882	mg/L	0.05443	-0.6882	mg/L	0.05443	7.91%
Ni 231.604†	0.5	0.00013	mg/L	0.001338	0.00013	mg/L	0.001338	>999.9%
Pb 220.353†	-300.5	0.00217	mg/L	0.000584	0.00217	mg/L	0.000584	26.90%
Sb 206.836†	25.7	0.00772	mg/L	0.005252	0.00772	mg/L	0.005252	68.05%
Se 196.026†	25.1	0.01686	mg/L	0.002317	0.01686	mg/L	0.002317	13.74%
Si 288.158†	-30.2	-0.00162	mg/L	0.003162	-0.00162	mg/L	0.003162	195.03%
Sn 189.927†	-76.8	-0.00764	mg/L	0.001565	-0.00764	mg/L	0.001565	20.49%
Sr 421.552†	3622.8	0.00387	mg/L Conf.	0.000024	0.00387	mg/L	0.000024	0.61%
Ti 334.903†	152.9	0.00268	mg/L	0.000157	0.00268	mg/L	0.000157	5.86%
Tl 190.801†	-53.8	-0.00056	mg/L	0.002577	-0.00056	mg/L	0.002577	462.75%
V 292.402†	1360.9	0.00368	mg/L	0.000137	0.00368	mg/L	0.000137	3.73%
Zn 206.200†	16.8	0.00414	mg/L	0.000676	0.00414	mg/L	0.000676	16.33%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 9:22:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2190888.4	97.06	%	0.945				0.97%
ScR 361.383	280553.1	98.12	%	1.630				1.66%
Ag 328.068†	174109.6	0.9855	mg/L	0.01251	0.9855	mg/L	0.01251	1.27%
Al 308.215†	345774.5	194.1	mg/L	3.64	194.1	mg/L	3.64	1.87%
As 188.979†	1856.0	0.9764	mg/L	0.00758	0.9764	mg/L	0.00758	0.78%
B 249.677†	4.4	-0.00148	mg/L	0.000384	-0.00148	mg/L	0.000384	25.84%
Ba 233.527†	4703.1	1.005	mg/L	0.0174	1.005	mg/L	0.0174	1.73%
Be 313.042†	621412.9	0.9342	mg/L	0.01515	0.9342	mg/L	0.01515	1.62%
Ca 317.933†	1384278.5	97.46	mg/L	1.849	97.46	mg/L	1.849	1.90%
Cd 228.802†	32640.6	1.023	mg/L	0.0103	1.023	mg/L	0.0103	1.01%
Co 228.616†	35083.8	0.9923	mg/L	0.00677	0.9923	mg/L	0.00677	0.68%
Cr 267.716†	6250.0	1.004	mg/L	0.0188	1.004	mg/L	0.0188	1.87%
Cu 324.752†	264088.7	1.023	mg/L	0.0118	1.023	mg/L	0.0118	1.15%
Fe 273.955†	250591.4	191.1	mg/L	3.79	191.1	mg/L	3.79	1.98%
K 766.490†	-57.9	-0.02907	mg/L	0.026894	-0.02907	mg/L	0.026894	92.50%
Mg 279.077†	144004.0	97.55	mg/L	1.854	97.55	mg/L	1.854	1.90%
Mn 257.610†	34625.5	0.9572	mg/L	0.01844	0.9572	mg/L	0.01844	1.93%
Mo 202.031†	39.2	0.00085	mg/L	0.000259	0.00085	mg/L	0.000259	30.55%
Na 589.592†	393.4	0.03087	mg/L	0.003439	0.03087	mg/L	0.003439	11.14%
Na 330.237†	-6.8	-0.5377	mg/L	0.12445	-0.5377	mg/L	0.12445	23.14%
Ni 231.604†	3861.8	0.9372	mg/L	0.01594	0.9372	mg/L	0.01594	1.70%
Pb 220.353†	7369.5	0.9602	mg/L	0.00787	0.9602	mg/L	0.00787	0.82%
Sb 206.836†	3346.2	1.013	mg/L	0.0073	1.013	mg/L	0.0073	0.72%
Se 196.026†	1441.3	0.9670	mg/L	0.00596	0.9670	mg/L	0.00596	0.62%
Si 288.158†	-35.4	-0.00092	mg/L	0.002202	-0.00092	mg/L	0.002202	238.98%
Sn 189.927†	-78.2	-0.00752	mg/L	0.001086	-0.00752	mg/L	0.001086	14.44%
Sr 421.552†	3451.0	0.00368	mg/L	Conf. 0.000068	0.00368	mg/L	0.000068	1.83%
Ti 334.903†	142.2	0.00197	mg/L	0.000354	0.00197	mg/L	0.000354	17.98%
Tl 190.801†	2300.9	0.9111	mg/L	0.00358	0.9111	mg/L	0.00358	0.39%
V 292.402†	128370.6	0.9780	mg/L	0.01111	0.9780	mg/L	0.01111	1.14%
Zn 206.200†	3708.3	0.9147	mg/L	0.01559	0.9147	mg/L	0.01559	1.70%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/16/2012 9:26:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2252340.2	99.79	%	1.267				1.27%
ScR 361.383	280210.0	98.00	%	0.128				0.13%
Ag 328.068†	170394.8	0.9645	mg/L	0.01031	0.9645	mg/L	0.01031	1.07%
Al 308.215†	3796.5	2.098	mg/L	0.0465	2.098	mg/L	0.0465	2.22%
As 188.979†	3624.7	1.943	mg/L	0.0245	1.943	mg/L	0.0245	1.26%
B 249.677†	7600.7	0.9691	mg/L	0.00834	0.9691	mg/L	0.00834	0.86%
Ba 233.527†	4724.9	1.041	mg/L	0.0114	1.041	mg/L	0.0114	1.10%
Be 313.042†	624775.5	0.9393	mg/L	0.00408	0.9393	mg/L	0.00408	0.43%
Ca 317.933†	28107.5	1.979	mg/L	0.0536	1.979	mg/L	0.0536	2.71%
Cd 228.802†	32740.0	1.021	mg/L	0.0096	1.021	mg/L	0.0096	0.94%
Co 228.616†	36281.5	1.027	mg/L	0.0131	1.027	mg/L	0.0131	1.27%
Cr 267.716†	6427.3	1.034	mg/L	0.0105	1.034	mg/L	0.0105	1.01%
Cu 324.752†	257751.3	0.9908	mg/L	0.00855	0.9908	mg/L	0.00855	0.86%
Fe 273.955†	2794.7	2.125	mg/L	0.0446	2.125	mg/L	0.0446	2.10%
K 766.490†	39353.6	19.74	mg/L	0.168	19.74	mg/L	0.168	0.85%
Mg 279.077†	3061.6	2.083	mg/L	0.0247	2.083	mg/L	0.0247	1.19%
Mn 257.610†	35697.7	0.9871	mg/L	0.00445	0.9871	mg/L	0.00445	0.45%
Mo 202.031†	20351.2	1.014	mg/L	0.0141	1.014	mg/L	0.0141	1.39%
Na 589.592†	619955.6	48.66	mg/L	0.090	48.66	mg/L	0.090	0.18%
Na 330.237†	1493.2	51.86	mg/L	0.515	51.86	mg/L	0.515	0.99%
Ni 231.604†	4042.9	0.9813	mg/L	0.00733	0.9813	mg/L	0.00733	0.75%
Pb 220.353†	15832.2	1.980	mg/L	0.0261	1.980	mg/L	0.0261	1.32%
Sb 206.836†	6834.9	2.089	mg/L	0.0285	2.089	mg/L	0.0285	1.36%
Se 196.026†	2852.5	1.915	mg/L	0.0265	1.915	mg/L	0.0265	1.38%
Si 288.158†	4512.2	2.096	mg/L	0.0205	2.096	mg/L	0.0205	0.98%
Sn 189.927†	3879.2	0.9966	mg/L	0.01355	0.9966	mg/L	0.01355	1.36%
Sr 421.552†	887987.9	0.9479	mg/L	0.00441	0.9479	mg/L	0.00441	0.46%
Ti 334.903†	21042.2	1.008	mg/L	0.0048	1.008	mg/L	0.0048	0.48%
Tl 190.801†	4956.3	1.930	mg/L	0.0241	1.930	mg/L	0.0241	1.25%
V 292.402†	130347.7	0.9998	mg/L	0.00944	0.9998	mg/L	0.00944	0.94%
Zn 206.200†	4092.0	1.009	mg/L	0.0091	1.009	mg/L	0.0091	0.90%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/16/2012 9:31:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2213341.6	98.06	%	0.553				0.56%
ScR 361.383	278537.1	97.41	%	0.507				0.52%
Ag 328.068†	10.1	0.00006	mg/L	0.000066	0.00006	mg/L	0.000066	115.23%
Al 308.215†	26.5	0.01485	mg/L	0.007996	0.01485	mg/L	0.007996	53.83%
As 188.979†	-1.6	-0.00086	mg/L	0.000829	-0.00086	mg/L	0.000829	96.37%
B 249.677†	12.2	0.00156	mg/L	0.000945	0.00156	mg/L	0.000945	60.64%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000465	-0.00043	mg/L	0.000465	108.94%
Be 313.042†	124.3	0.00019	mg/L	0.000018	0.00019	mg/L	0.000018	9.73%
Ca 317.933†	76.5	0.00539	mg/L	0.000861	0.00539	mg/L	0.000861	15.99%
Cd 228.802†	-1.5	-0.00004	mg/L	0.000172	-0.00004	mg/L	0.000172	411.16%
Co 228.616†	-18.7	-0.00053	mg/L	0.000066	-0.00053	mg/L	0.000066	12.48%
Cr 267.716†	-10.8	-0.00174	mg/L	0.000634	-0.00174	mg/L	0.000634	36.45%
Cu 324.752†	58.6	0.00023	mg/L	0.000092	0.00023	mg/L	0.000092	40.94%
Fe 273.955†	13.0	0.00995	mg/L	0.000573	0.00995	mg/L	0.000573	5.76%
K 766.490†	16.7	0.00837	mg/L	0.009145	0.00837	mg/L	0.009145	109.22%
Mg 279.077†	12.3	0.00835	mg/L	0.003074	0.00835	mg/L	0.003074	36.82%
Mn 257.610†	-2.6	-0.00007	mg/L	0.000109	-0.00007	mg/L	0.000109	153.26%
Mo 202.031†	18.0	0.00090	mg/L	0.000213	0.00090	mg/L	0.000213	23.74%
Na 589.592†	82.8	0.00650	mg/L	0.004130	0.00650	mg/L	0.004130	63.56%
Na 330.237†	-17.5	-0.6092	mg/L	0.11089	-0.6092	mg/L	0.11089	18.20%
Ni 231.604†	0.3	0.00009	mg/L	0.001926	0.00009	mg/L	0.001926	>999.9%
Pb 220.353†	3.0	0.00038	mg/L	0.001361	0.00038	mg/L	0.001361	359.60%
Sb 206.836†	12.0	0.00368	mg/L	0.000378	0.00368	mg/L	0.000378	10.29%
Se 196.026†	3.9	0.00260	mg/L	0.005079	0.00260	mg/L	0.005079	195.50%
Si 288.158†	0.1	0.00007	mg/L	0.002269	0.00007	mg/L	0.002269	>999.9%
Sn 189.927†	-3.1	-0.00079	mg/L	0.000775	-0.00079	mg/L	0.000775	98.02%
Sr 421.552†	93.8	0.00010	mg/L	0.000004	0.00010	mg/L	0.000004	4.49%
Ti 334.903†	8.6	0.00041	mg/L	0.000041	0.00041	mg/L	0.000041	9.99%
Tl 190.801†	1.1	0.00045	mg/L	0.001014	0.00045	mg/L	0.001014	224.76%
V 292.402†	-22.4	-0.00018	mg/L	0.000205	-0.00018	mg/L	0.000205	114.77%
Zn 206.200†	2.4	0.00060	mg/L	0.000874	0.00060	mg/L	0.000874	145.52%

Sequence No.: 8
Sample ID: VR30 B SWC

Autosampler Location: 304
Date Collected: 11/16/2012 9:36:01 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2266905.1	100.4	%	0.27				0.27%
ScR 361.383	289782.5	101.3	%	1.06				1.04%
Ag 328.068†	-170.5	-0.00091	mg/L	0.000144	-0.00456	mg/L	0.000721	15.82%
Al 308.215†	162648.8	91.33	mg/L	0.923	456.6	mg/L	4.61	1.01%
As 188.979†	43.3	0.06856	mg/L	0.000959	0.3428	mg/L	0.00479	1.40%
B 249.677†	34.4	0.00426	mg/L	0.001057	0.02132	mg/L	0.005286	24.80%
Ba 233.527†	19790.3	4.337	mg/L	0.0357	21.68	mg/L	0.179	0.82%
Be 313.042†	3080.4	0.00458	mg/L	0.000094	0.02288	mg/L	0.000469	2.05%
Ca 317.933†	413333.6	29.10	mg/L	0.312	145.5	mg/L	1.56	1.07%
Cd 228.802†	319.3	0.00847	mg/L	0.000204	0.04236	mg/L	0.001020	2.41%
Co 228.616†	2197.9	0.05672	mg/L	0.000438	0.2836	mg/L	0.00219	0.77%
Cr 267.716†	667.9	0.1104	mg/L	0.00120	0.5520	mg/L	0.00598	1.08%
Cu 324.752†	17950.1	0.07548	mg/L	0.000282	0.3774	mg/L	0.00141	0.37%
Fe 273.955†	207489.5	158.3	mg/L	1.90	791.3	mg/L	9.48	1.20%
K 766.490†	14039.4	7.044	mg/L	0.0813	35.22	mg/L	0.406	1.15%
Mg 279.077†	37594.5	25.41	mg/L	0.284	127.0	mg/L	1.42	1.12%
Mn 257.610†	328609.6	9.083	mg/L	0.1096	45.42	mg/L	0.548	1.21%
Mo 202.031†	90.3	0.00418	mg/L	0.000481	0.02090	mg/L	0.002403	11.49%
Na 589.592†	5621.5	0.4412	mg/L	0.00457	2.206	mg/L	0.0228	1.03%
Na 330.237†	-5.5	-0.07749	mg/L	0.151056	-0.3875	mg/L	0.75528	194.93%
Ni 231.604†	297.6	0.07221	mg/L	0.001673	0.3611	mg/L	0.00836	2.32%
Pb 220.353†	2347.5	0.3088	mg/L	0.00255	1.544	mg/L	0.0127	0.82%
Sb 206.836†	26.8	0.00801	mg/L	0.000467	0.04004	mg/L	0.002333	5.83%
Se 196.026†	16.3	0.01078	mg/L	0.004755	0.05392	mg/L	0.023776	44.10%
Si 288.158†	3340.8	1.555	mg/L	0.0200	7.777	mg/L	0.1001	1.29%
Sn 189.927†	-44.4	-0.00755	mg/L	0.000500	-0.03774	mg/L	0.002499	6.62%
Sr 421.552†	213985.5	0.2284	mg/L	0.00232	1.142	mg/L	0.0116	1.01%
Ti 334.903†	34546.6	1.656	mg/L	0.0190	8.281	mg/L	0.0949	1.15%
Tl 190.801†	-37.1	0.00141	mg/L	0.002325	0.00703	mg/L	0.011623	165.25%
V 292.402†	23994.9	0.1786	mg/L	0.00178	0.8930	mg/L	0.00888	0.99%
Zn 206.200†	3237.8	0.7987	mg/L	0.01198	3.993	mg/L	0.0599	1.50%

Sequence No.: 9
Sample ID: VR30 D SWC

Autosampler Location: 305
Date Collected: 11/16/2012 9:40:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2278324.3	100.9	%	0.13				0.13%
ScR 361.383	289032.3	101.1	%	0.60				0.59%
Ag 328.068†	-143.4	-0.00077	mg/L	0.000275	-0.00383	mg/L	0.001374	35.87%
Al 308.215†	202390.7	113.6	mg/L	1.13	568.2	mg/L	5.65	1.00%
As 188.979†	-78.3	0.04162	mg/L	0.003479	0.2081	mg/L	0.01740	8.36%
B 249.677†	75.1	0.00950	mg/L	0.000729	0.04749	mg/L	0.003647	7.68%
Ba 233.527†	7044.7	1.538	mg/L	0.0050	7.688	mg/L	0.0248	0.32%
Be 313.042†	2287.1	0.00337	mg/L	0.000038	0.01686	mg/L	0.000188	1.11%
Ca 317.933†	316955.2	22.31	mg/L	0.261	111.6	mg/L	1.31	1.17%
Cd 228.802†	170.4	0.00484	mg/L	0.000162	0.02418	mg/L	0.000811	3.35%
Co 228.616†	1530.3	0.03634	mg/L	0.000259	0.1817	mg/L	0.00130	0.71%
Cr 267.716†	677.4	0.1101	mg/L	0.00083	0.5504	mg/L	0.00414	0.75%
Cu 324.752†	22713.0	0.09068	mg/L	0.000915	0.4534	mg/L	0.00458	1.01%
Fe 273.955†	122919.1	93.75	mg/L	0.757	468.7	mg/L	3.78	0.81%
K 766.490†	10663.0	5.350	mg/L	0.0506	26.75	mg/L	0.253	0.95%
Mg 279.077†	36162.3	24.47	mg/L	0.235	122.4	mg/L	1.17	0.96%
Mn 257.610†	117928.4	3.260	mg/L	0.0282	16.30	mg/L	0.141	0.87%
Mo 202.031†	50.0	0.00224	mg/L	0.000279	0.01122	mg/L	0.001396	12.44%
Na 589.592†	10175.1	0.7986	mg/L	0.00830	3.993	mg/L	0.0415	1.04%
Na 330.237†	-3.2	0.3999	mg/L	0.12593	1.999	mg/L	0.6297	31.49%
Ni 231.604†	374.6	0.09089	mg/L	0.001860	0.4545	mg/L	0.00930	2.05%
Pb 220.353†	2020.7	0.2760	mg/L	0.00190	1.380	mg/L	0.0095	0.69%
Sb 206.836†	4.1	0.00152	mg/L	0.002680	0.00758	mg/L	0.013399	176.83%
Se 196.026†	19.3	0.01286	mg/L	0.003491	0.06428	mg/L	0.017453	27.15%
Si 288.158†	2012.7	0.9381	mg/L	0.00831	4.691	mg/L	0.0416	0.89%
Sn 189.927†	-35.4	-0.00589	mg/L	0.000936	-0.02943	mg/L	0.004678	15.90%
Sr 421.552†	256275.4	0.2736	mg/L	0.00281	1.368	mg/L	0.0140	1.03%
Ti 334.903†	61510.5	2.950	mg/L	0.0262	14.75	mg/L	0.131	0.89%
Tl 190.801†	-15.9	0.00298	mg/L	0.001542	0.01491	mg/L	0.007708	51.69%
V 292.402†	20627.2	0.1535	mg/L	0.00173	0.7677	mg/L	0.00863	1.12%
Zn 206.200†	1977.1	0.4877	mg/L	0.00234	2.439	mg/L	0.0117	0.48%

Sequence No.: 10
Sample ID: VR30 E SWC

Autosampler Location: 306
Date Collected: 11/16/2012 9:44:05 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311384.2	102.4	%	0.49				0.48%
ScR 361.383	292296.6	102.2	%	0.90				0.88%
Ag 328.068†	-158.6	-0.00084	mg/L	0.000344	-0.00421	mg/L	0.001718	40.78%
Al 308.215†	240475.3	135.0	mg/L	1.32	675.1	mg/L	6.59	0.98%
As 188.979†	-127.2	0.03169	mg/L	0.002950	0.1585	mg/L	0.01475	9.31%
B 249.677†	62.6	0.00788	mg/L	0.000863	0.03942	mg/L	0.004317	10.95%
Ba 233.527†	6971.3	1.519	mg/L	0.0137	7.594	mg/L	0.0685	0.90%
Be 313.042†	2594.1	0.00382	mg/L	0.000047	0.01910	mg/L	0.000233	1.22%
Ca 317.933†	218878.8	15.41	mg/L	0.157	77.05	mg/L	0.783	1.02%
Cd 228.802†	63.8	0.00150	mg/L	0.000182	0.00749	mg/L	0.000908	12.12%
Co 228.616†	1830.0	0.04358	mg/L	0.000563	0.2179	mg/L	0.00281	1.29%
Cr 267.716†	708.5	0.1157	mg/L	0.00192	0.5784	mg/L	0.00958	1.66%
Cu 324.752†	26515.0	0.1059	mg/L	0.00110	0.5294	mg/L	0.00550	1.04%
Fe 273.955†	143936.1	109.8	mg/L	1.24	548.9	mg/L	6.21	1.13%
K 766.490†	11246.5	5.643	mg/L	0.0386	28.21	mg/L	0.193	0.68%
Mg 279.077†	39859.6	26.97	mg/L	0.262	134.9	mg/L	1.31	0.97%
Mn 257.610†	62486.0	1.727	mg/L	0.0192	8.635	mg/L	0.0959	1.11%
Mo 202.031†	31.2	0.00138	mg/L	0.000182	0.00692	mg/L	0.000908	13.12%
Na 589.592†	12027.3	0.9440	mg/L	0.01222	4.720	mg/L	0.0611	1.29%
Na 330.237†	-8.2	0.3827	mg/L	0.17400	1.913	mg/L	0.8700	45.47%
Ni 231.604†	417.3	0.1013	mg/L	0.00226	0.5063	mg/L	0.01128	2.23%
Pb 220.353†	422.7	0.08070	mg/L	0.000817	0.4035	mg/L	0.00408	1.01%
Sb 206.836†	4.8	0.00203	mg/L	0.002279	0.01013	mg/L	0.011394	112.52%
Se 196.026†	22.1	0.01469	mg/L	0.002003	0.07343	mg/L	0.010016	13.64%
Si 288.158†	1514.3	0.7069	mg/L	0.00805	3.534	mg/L	0.0403	1.14%
Sn 189.927†	-30.3	-0.00535	mg/L	0.000385	-0.02676	mg/L	0.001923	7.19%
Sr 421.552†	164339.3	0.1754	mg/L	0.00187	0.8772	mg/L	0.00933	1.06%
Ti 334.903†	72845.9	3.495	mg/L	0.0345	17.47	mg/L	0.172	0.99%
Tl 190.801†	-27.4	0.00002	mg/L	0.002025	0.00012	mg/L	0.010127	>999.9%
V 292.402†	24789.3	0.1842	mg/L	0.00209	0.9212	mg/L	0.01046	1.14%
Zn 206.200†	1558.1	0.3843	mg/L	0.00293	1.922	mg/L	0.0147	0.76%

Sequence No.: 11
Sample ID: VR30 F SWC

Autosampler Location: 307
Date Collected: 11/16/2012 9:48:06 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2335671.1	103.5	%	0.57				0.56%
ScR 361.383	295425.7	103.3	%	0.36				0.35%
Ag 328.068†	-123.7	-0.00065	mg/L	0.000122	-0.00325	mg/L	0.000608	18.72%
Al 308.215†	243146.9	136.5	mg/L	1.55	682.6	mg/L	7.75	1.14%
As 188.979†	-124.0	0.03516	mg/L	0.003806	0.1758	mg/L	0.01903	10.83%
B 249.677†	52.3	0.00658	mg/L	0.000314	0.03288	mg/L	0.001572	4.78%
Ba 233.527†	5947.7	1.294	mg/L	0.0080	6.468	mg/L	0.0399	0.62%
Be 313.042†	2624.1	0.00387	mg/L	0.000009	0.01934	mg/L	0.000043	0.22%
Ca 317.933†	198838.3	14.00	mg/L	0.147	69.99	mg/L	0.734	1.05%
Cd 228.802†	65.4	0.00157	mg/L	0.000171	0.00786	mg/L	0.000854	10.85%
Co 228.616†	1760.4	0.04156	mg/L	0.000875	0.2078	mg/L	0.00438	2.11%
Cr 267.716†	714.1	0.1165	mg/L	0.00089	0.5825	mg/L	0.00445	0.76%
Cu 324.752†	28865.0	0.1147	mg/L	0.00267	0.5737	mg/L	0.01336	2.33%
Fe 273.955†	139042.8	106.0	mg/L	0.68	530.2	mg/L	3.39	0.64%
K 766.490†	11233.6	5.636	mg/L	0.0632	28.18	mg/L	0.316	1.12%
Mg 279.077†	38352.7	25.95	mg/L	0.216	129.8	mg/L	1.08	0.83%
Mn 257.610†	73481.2	2.031	mg/L	0.0163	10.15	mg/L	0.081	0.80%
Mo 202.031†	25.7	0.00113	mg/L	0.000660	0.00563	mg/L	0.003301	58.66%
Na 589.592†	12361.3	0.9702	mg/L	0.01292	4.851	mg/L	0.0646	1.33%
Na 330.237†	-3.6	0.5544	mg/L	0.07014	2.772	mg/L	0.3507	12.65%
Ni 231.604†	416.3	0.1010	mg/L	0.00188	0.5051	mg/L	0.00939	1.86%
Pb 220.353†	313.0	0.06748	mg/L	0.001074	0.3374	mg/L	0.00537	1.59%
Sb 206.836†	5.3	0.00213	mg/L	0.001072	0.01064	mg/L	0.005358	50.35%
Se 196.026†	22.5	0.01499	mg/L	0.004442	0.07497	mg/L	0.022212	29.63%
Si 288.158†	1302.0	0.6081	mg/L	0.00665	3.041	mg/L	0.0333	1.09%
Sn 189.927†	-26.8	-0.00464	mg/L	0.001177	-0.02322	mg/L	0.005884	25.34%
Sr 421.552†	170535.5	0.1821	mg/L	0.00217	0.9103	mg/L	0.01084	1.19%
Ti 334.903†	74072.0	3.553	mg/L	0.0371	17.77	mg/L	0.186	1.04%
Tl 190.801†	-24.7	0.00076	mg/L	0.002734	0.00382	mg/L	0.013671	358.34%
V 292.402†	22669.5	0.1682	mg/L	0.00328	0.8410	mg/L	0.01640	1.95%
Zn 206.200†	1583.3	0.3905	mg/L	0.00192	1.953	mg/L	0.0096	0.49%

Sequence No.: 12
Sample ID: VR30 G SWC

Autosampler Location: 308
Date Collected: 11/16/2012 9:52:07 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282264.3	101.1	%	0.28				0.28%
ScR 361.383	294092.7	102.9	%	1.17				1.14%
Ag 328.068†	154.9	0.00093	mg/L	0.000133	0.00466	mg/L	0.000666	14.28%
Al 308.215†	259195.3	145.5	mg/L	1.35	727.7	mg/L	6.77	0.93%
As 188.979†	-133.3	0.03835	mg/L	0.001463	0.1917	mg/L	0.00732	3.82%
B 249.677†	54.6	0.00686	mg/L	0.000813	0.03428	mg/L	0.004063	11.85%
Ba 233.527†	5452.1	1.183	mg/L	0.0098	5.917	mg/L	0.0489	0.83%
Be 313.042†	2750.3	0.00405	mg/L	0.000054	0.02025	mg/L	0.000272	1.35%
Ca 317.933†	226126.0	15.92	mg/L	0.151	79.60	mg/L	0.757	0.95%
Cd 228.802†	57.1	0.00130	mg/L	0.000018	0.00649	mg/L	0.000091	1.40%
Co 228.616†	1882.9	0.04439	mg/L	0.000381	0.2220	mg/L	0.00191	0.86%
Cr 267.716†	1027.6	0.1670	mg/L	0.00182	0.8349	mg/L	0.00912	1.09%
Cu 324.752†	39506.5	0.1559	mg/L	0.00068	0.7794	mg/L	0.00342	0.44%
Fe 273.955†	147721.2	112.7	mg/L	0.84	563.3	mg/L	4.18	0.74%
K 766.490†	11750.0	5.895	mg/L	0.0618	29.48	mg/L	0.309	1.05%
Mg 279.077†	42799.3	28.96	mg/L	0.258	144.8	mg/L	1.29	0.89%
Mn 257.610†	66779.2	1.846	mg/L	0.0135	9.229	mg/L	0.0674	0.73%
Mo 202.031†	34.3	0.00153	mg/L	0.000201	0.00764	mg/L	0.001004	13.14%
Na 589.592†	14629.0	1.148	mg/L	0.0103	5.741	mg/L	0.0517	0.90%
Na 330.237†	-4.2	0.6052	mg/L	0.01543	3.026	mg/L	0.0771	2.55%
Ni 231.604†	502.6	0.1220	mg/L	0.00241	0.6098	mg/L	0.01207	1.98%
Pb 220.353†	408.1	0.08130	mg/L	0.001102	0.4065	mg/L	0.00551	1.36%
Sb 206.836†	5.5	0.00165	mg/L	0.002497	0.00823	mg/L	0.012483	151.72%
Se 196.026†	33.0	0.02201	mg/L	0.004233	0.1100	mg/L	0.02116	19.23%
Si 288.158†	1008.6	0.4721	mg/L	0.00726	2.361	mg/L	0.0363	1.54%
Sn 189.927†	-35.7	-0.00664	mg/L	0.000881	-0.03319	mg/L	0.004404	13.27%
Sr 421.552†	198112.6	0.2115	mg/L	0.00183	1.057	mg/L	0.0092	0.87%
Ti 334.903†	80106.7	3.843	mg/L	0.0309	19.21	mg/L	0.154	0.80%
Tl 190.801†	-34.4	-0.00245	mg/L	0.003700	-0.01226	mg/L	0.018500	150.95%
V 292.402†	25520.1	0.1898	mg/L	0.00102	0.9488	mg/L	0.00509	0.54%
Zn 206.200†	1509.9	0.3724	mg/L	0.00300	1.862	mg/L	0.0150	0.81%

Sequence No.: 13
Sample ID: VR30 H SWC

Autosampler Location: 309
Date Collected: 11/16/2012 9:56:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2304118.0	102.1	%	0.36				0.35%
ScR 361.383	292173.5	102.2	%	0.43				0.42%
Ag 328.068†	-26.8	-0.00011	mg/L	0.000153	-0.00056	mg/L	0.000767	137.32%
Al 308.215†	182483.0	102.5	mg/L	0.90	512.3	mg/L	4.51	0.88%
As 188.979†	-86.8	0.03301	mg/L	0.003044	0.1651	mg/L	0.01522	9.22%
B 249.677†	56.6	0.00714	mg/L	0.000636	0.03572	mg/L	0.003182	8.91%
Ba 233.527†	8522.4	1.865	mg/L	0.0101	9.324	mg/L	0.0507	0.54%
Be 313.042†	1982.1	0.00292	mg/L	0.000037	0.01460	mg/L	0.000184	1.26%
Ca 317.933†	200605.4	14.12	mg/L	0.067	70.62	mg/L	0.337	0.48%
Cd 228.802†	142.9	0.00408	mg/L	0.000100	0.02041	mg/L	0.000498	2.44%
Co 228.616†	1380.0	0.03248	mg/L	0.000055	0.1624	mg/L	0.00027	0.17%
Cr 267.716†	619.7	0.1012	mg/L	0.00056	0.5058	mg/L	0.00278	0.55%
Cu 324.752†	14634.6	0.05931	mg/L	0.000195	0.2966	mg/L	0.00098	0.33%
Fe 273.955†	111084.1	84.72	mg/L	0.895	423.6	mg/L	4.47	1.06%
K 766.490†	11432.8	5.736	mg/L	0.0169	28.68	mg/L	0.085	0.30%
Mg 279.077†	24568.5	16.62	mg/L	0.121	83.08	mg/L	0.606	0.73%
Mn 257.610†	126564.1	3.498	mg/L	0.0331	17.49	mg/L	0.166	0.95%
Mo 202.031†	36.8	0.00168	mg/L	0.000151	0.00839	mg/L	0.000757	9.02%
Na 589.592†	9746.1	0.7649	mg/L	0.00707	3.825	mg/L	0.0354	0.92%
Na 330.237†	-3.3	0.3435	mg/L	0.17601	1.717	mg/L	0.8801	51.25%
Ni 231.604†	365.8	0.08876	mg/L	0.001396	0.4438	mg/L	0.00698	1.57%
Pb 220.353†	1019.0	0.1485	mg/L	0.00129	0.7425	mg/L	0.00646	0.87%
Sb 206.836†	7.4	0.00251	mg/L	0.001512	0.01254	mg/L	0.007558	60.27%
Se 196.026†	17.1	0.01136	mg/L	0.000712	0.05681	mg/L	0.003560	6.27%
Si 288.158†	3243.5	1.509	mg/L	0.0108	7.545	mg/L	0.0539	0.71%
Sn 189.927†	-29.3	-0.00536	mg/L	0.000912	-0.02682	mg/L	0.004560	17.01%
Sr 421.552†	164364.3	0.1755	mg/L	0.00133	0.8773	mg/L	0.00665	0.76%
Ti 334.903†	58175.4	2.791	mg/L	0.0237	13.95	mg/L	0.119	0.85%
Tl 190.801†	-17.9	0.00134	mg/L	0.000928	0.00671	mg/L	0.004642	69.21%
V 292.402†	18134.9	0.1349	mg/L	0.00040	0.6745	mg/L	0.00200	0.30%
Zn 206.200†	2160.2	0.5329	mg/L	0.00349	2.664	mg/L	0.0174	0.65%

Sequence No.: 14
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 11/16/2012 10:00:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2211042.3	97.96	%	0.069				0.07%
ScR 361.383	281425.6	98.42	%	1.154				1.17%
Ag 328.068†	174051.3	0.9852	mg/L	0.00100	0.9852	mg/L	0.00100	0.10%
Al 308.215†	3696.9	2.041	mg/L	0.0284	2.041	mg/L	0.0284	1.39%
As 188.979†	3657.6	1.961	mg/L	0.0138	1.961	mg/L	0.0138	0.70%
B 249.677†	7567.5	0.9649	mg/L	0.01213	0.9649	mg/L	0.01213	1.26%
Ba 233.527†	4721.2	1.040	mg/L	0.0139	1.040	mg/L	0.0139	1.34%
Be 313.042†	626887.5	0.9424	mg/L	0.00875	0.9424	mg/L	0.00875	0.93%
Ca 317.933†	27675.8	1.948	mg/L	0.0181	1.948	mg/L	0.0181	0.93%
Cd 228.802†	33109.2	1.033	mg/L	0.0016	1.033	mg/L	0.0016	0.15%
Co 228.616†	35891.2	1.016	mg/L	0.0028	1.016	mg/L	0.0028	0.27%
Cr 267.716†	6399.9	1.030	mg/L	0.0131	1.030	mg/L	0.0131	1.27%
Cu 324.752†	262871.7	1.010	mg/L	0.0029	1.010	mg/L	0.0029	0.29%
Fe 273.955†	2689.1	2.044	mg/L	0.0153	2.044	mg/L	0.0153	0.75%
K 766.490†	39762.4	19.95	mg/L	0.215	19.95	mg/L	0.215	1.08%
Mg 279.077†	3000.3	2.042	mg/L	0.0213	2.042	mg/L	0.0213	1.04%
Mn 257.610†	35687.8	0.9868	mg/L	0.00584	0.9868	mg/L	0.00584	0.59%
Mo 202.031†	20686.3	1.031	mg/L	0.0051	1.031	mg/L	0.0051	0.50%
Na 589.592†	624588.1	49.02	mg/L	0.566	49.02	mg/L	0.566	1.16%
Na 330.237†	1491.7	51.81	mg/L	0.515	51.81	mg/L	0.515	0.99%
Ni 231.604†	4026.4	0.9773	mg/L	0.01189	0.9773	mg/L	0.01189	1.22%
Pb 220.353†	16046.0	2.006	mg/L	0.0116	2.006	mg/L	0.0116	0.58%
Sb 206.836†	6936.1	2.120	mg/L	0.0113	2.120	mg/L	0.0113	0.53%
Se 196.026†	2873.6	1.929	mg/L	0.0077	1.929	mg/L	0.0077	0.40%
Si 288.158†	4492.6	2.087	mg/L	0.0245	2.087	mg/L	0.0245	1.17%
Sn 189.927†	3917.5	1.006	mg/L	0.0067	1.006	mg/L	0.0067	0.67%
Sr 421.552†	893900.0	0.9543	mg/L	0.00885	0.9543	mg/L	0.00885	0.93%
Ti 334.903†	21172.9	1.015	mg/L	0.0086	1.015	mg/L	0.0086	0.85%
Tl 190.801†	5037.5	1.962	mg/L	0.0100	1.962	mg/L	0.0100	0.51%
V 292.402†	132402.6	1.016	mg/L	0.0017	1.016	mg/L	0.0017	0.16%
Zn 206.200†	4049.1	0.9986	mg/L	0.00989	0.9986	mg/L	0.00989	0.99%

Sequence No.: 15
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/16/2012 10:05:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2265302.0	100.4	%	0.82				0.82%
ScR 361.383	286386.1	100.2	%	1.19				1.19%
Ag 328.068†	43.5	0.00025	mg/L	0.000120	0.00025	mg/L	0.000120	48.67%
Al 308.215†	21.7	0.01219	mg/L	0.007834	0.01219	mg/L	0.007834	64.25%
As 188.979†	0.3	0.00019	mg/L	0.000600	0.00019	mg/L	0.000600	312.17%
B 249.677†	12.0	0.00153	mg/L	0.000504	0.00153	mg/L	0.000504	32.86%
Ba 233.527†	-1.7	-0.00038	mg/L	0.000659	-0.00038	mg/L	0.000659	173.90%
Be 313.042†	64.0	0.00010	mg/L	0.000019	0.00010	mg/L	0.000019	19.48%
Ca 317.933†	16.5	0.00116	mg/L	0.000843	0.00116	mg/L	0.000843	72.42%
Cd 228.802†	-8.9	-0.00028	mg/L	0.000164	-0.00028	mg/L	0.000164	58.05%
Co 228.616†	-15.4	-0.00044	mg/L	0.000071	-0.00044	mg/L	0.000071	16.37%
Cr 267.716†	-8.6	-0.00139	mg/L	0.000844	-0.00139	mg/L	0.000844	60.74%
Cu 324.752†	68.6	0.00026	mg/L	0.000163	0.00026	mg/L	0.000163	61.90%
Fe 273.955†	5.6	0.00430	mg/L	0.000901	0.00430	mg/L	0.000901	20.97%
K 766.490†	18.2	0.00913	mg/L	0.009749	0.00913	mg/L	0.009749	106.78%
Mg 279.077†	0.3	0.00020	mg/L	0.005138	0.00020	mg/L	0.005138	>999.9%
Mn 257.610†	-7.6	-0.00021	mg/L	0.000032	-0.00021	mg/L	0.000032	15.24%
Mo 202.031†	19.2	0.00096	mg/L	0.000202	0.00096	mg/L	0.000202	21.17%
Na 589.592†	39.1	0.00307	mg/L	0.003488	0.00307	mg/L	0.003488	113.79%
Na 330.237†	-5.3	-0.1843	mg/L	0.30022	-0.1843	mg/L	0.30022	162.93%
Ni 231.604†	-1.2	-0.00029	mg/L	0.000758	-0.00029	mg/L	0.000758	263.29%
Pb 220.353†	-0.0	-0.00000	mg/L	0.000645	-0.00000	mg/L	0.000645	>999.9%
Sb 206.836†	5.6	0.00173	mg/L	0.000288	0.00173	mg/L	0.000288	16.60%
Se 196.026†	5.5	0.00369	mg/L	0.002885	0.00369	mg/L	0.002885	78.20%
Si 288.158†	-4.6	-0.00215	mg/L	0.000930	-0.00215	mg/L	0.000930	43.21%
Sn 189.927†	-0.1	-0.00004	mg/L	0.000153	-0.00004	mg/L	0.000153	422.92%
Sr 421.552†	74.2	0.00008	mg/L	0.000064	0.00008	mg/L	0.000064	81.28%
Ti 334.903†	13.8	0.00066	mg/L	0.000293	0.00066	mg/L	0.000293	44.17%
Tl 190.801†	3.8	0.00148	mg/L	0.002469	0.00148	mg/L	0.002469	166.41%
V 292.402†	-13.7	-0.00011	mg/L	0.000165	-0.00011	mg/L	0.000165	148.94%
Zn 206.200†	0.1	0.00001	mg/L	0.000819	0.00001	mg/L	0.000819	>999.9%

Sequence No.: 16
Sample ID: VR32 A-L SWC

Autosampler Location: 310
Date Collected: 11/16/2012 10:09:17 AM
Data Type: Original

Dilution: ~~5.000000X~~
25 BA 11/16/12

Nebulizer Parameters: VR32 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263964.5	100.3	%	1.16				1.16%
ScR 361.383	289102.2	101.1	%	1.21				1.20%
Ag 328.068†	1.8	0.00002	mg/L	0.000139	0.00009	mg/L	0.000697	766.84%
Al 308.215†	35071.1	19.69	mg/L	0.251	98.46	mg/L	1.256	1.28%
As 188.979†	-6.8	0.01278	mg/L	0.001588	0.06388	mg/L	0.007941	12.43%
B 249.677†	16.0	0.00202	mg/L	0.000804	0.01011	mg/L	0.004018	39.73%
Ba 233.527†	1517.2	0.3312	mg/L	0.00507	1.656	mg/L	0.0253	1.53%
Be 313.042†	477.1	0.00070	mg/L	0.000016	0.00352	mg/L	0.000078	2.20%
Ca 317.933†	53929.3	3.797	mg/L	0.0476	18.98	mg/L	0.238	1.25%
Cd 228.802†	51.9	0.00150	mg/L	0.000067	0.00748	mg/L	0.000336	4.49%
Co 228.616†	318.2	0.00762	mg/L	0.000172	0.03808	mg/L	0.000858	2.25%
Cr 267.716†	172.9	0.02808	mg/L	0.000513	0.1404	mg/L	0.00257	1.83%
Cu 324.752†	3757.1	0.01517	mg/L	0.000277	0.07583	mg/L	0.001386	1.83%
Fe 273.955†	25985.8	19.82	mg/L	0.298	99.10	mg/L	1.488	1.50%
K 766.490†	3537.6	1.775	mg/L	0.0078	8.874	mg/L	0.0392	0.44%
Mg 279.077†	6835.6	4.625	mg/L	0.0727	23.12	mg/L	0.364	1.57%
Mn 257.610†	34973.5	0.9667	mg/L	0.01391	4.833	mg/L	0.0696	1.44%
Mo 202.031†	14.8	0.00069	mg/L	0.000185	0.00347	mg/L	0.000926	26.67%
Na 589.592†	2333.0	0.1831	mg/L	0.00242	0.9156	mg/L	0.01208	1.32%
Na 330.237†	-7.3	-0.1758	mg/L	0.12318	-0.8792	mg/L	0.61592	70.05%
Ni 231.604†	106.2	0.02576	mg/L	0.001486	0.1288	mg/L	0.00743	5.77%
Pb 220.353†	344.1	0.04693	mg/L	0.000479	0.2346	mg/L	0.00240	1.02%
Sb 206.836†	2.8	0.00079	mg/L	0.002290	0.00394	mg/L	0.011451	290.68%
Se 196.026†	7.5	0.00503	mg/L	0.000195	0.02515	mg/L	0.000974	3.87%
Si 288.158†	610.3	0.2842	mg/L	0.00735	1.421	mg/L	0.0367	2.59%
Sn 189.927†	-15.2	-0.00333	mg/L	0.000876	-0.01667	mg/L	0.004380	26.27%
Sr 421.552†	49479.6	0.05282	mg/L	0.000685	0.2641	mg/L	0.00343	1.30%
Ti 334.903†	12091.4	0.5800	mg/L	0.00664	2.900	mg/L	0.0332	1.14%
Tl 190.801†	-4.1	0.00038	mg/L	0.001668	0.00189	mg/L	0.008338	442.25%
V 292.402†	3634.0	0.02700	mg/L	0.000188	0.1350	mg/L	0.00094	0.70%
Zn 206.200†	643.0	0.1586	mg/L	0.00272	0.7930	mg/L	0.01358	1.71%

Sequence No.: 17
Sample ID: VR32 A SWC

Autosampler Location: 311
Date Collected: 11/16/2012 10:13:18 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2294229.4	101.6	%	0.46				0.45%
ScR 361.383	295890.1	103.5	%	0.43				0.41%
Ag 328.068†	-156.2	-0.00084	mg/L	0.000165	-0.00422	mg/L	0.000823	19.50%
Al 308.215†	177445.1	99.63	mg/L	0.360	498.2	mg/L	1.80	0.36%
As 188.979†	-27.6	0.06704	mg/L	0.003549	0.3352	mg/L	0.01774	5.29%
B 249.677†	73.7	0.00931	mg/L	0.000509	0.04654	mg/L	0.002545	5.47%
Ba 233.527†	7580.0	1.654	mg/L	0.0060	8.272	mg/L	0.0300	0.36%
Be 313.042†	2081.1	0.00307	mg/L	0.000006	0.01533	mg/L	0.000032	0.21%
Ca 317.933†	274913.4	19.35	mg/L	0.161	96.77	mg/L	0.804	0.83%
Cd 228.802†	304.1	0.00885	mg/L	0.000145	0.04426	mg/L	0.000726	1.64%
Co 228.616†	1656.8	0.03993	mg/L	0.000312	0.1997	mg/L	0.00156	0.78%
Cr 267.716†	870.7	0.1414	mg/L	0.00064	0.7071	mg/L	0.00321	0.45%
Cu 324.752†	18754.4	0.07576	mg/L	0.000979	0.3788	mg/L	0.00489	1.29%
Fe 273.955†	131271.6	100.1	mg/L	0.52	500.6	mg/L	2.62	0.52%
K 766.490†	17547.5	8.804	mg/L	0.0319	44.02	mg/L	0.159	0.36%
Mg 279.077†	34216.1	23.15	mg/L	0.098	115.7	mg/L	0.49	0.42%
Mn 257.610†	176776.0	4.886	mg/L	0.0265	24.43	mg/L	0.133	0.54%
Mo 202.031†	68.0	0.00317	mg/L	0.000211	0.01585	mg/L	0.001055	6.65%
Na 589.592†	11555.3	0.9069	mg/L	0.00610	4.535	mg/L	0.0305	0.67%
Na 330.237†	4.8	0.5629	mg/L	0.15697	2.815	mg/L	0.7848	27.88%
Ni 231.604†	518.2	0.1257	mg/L	0.00069	0.6287	mg/L	0.00343	0.55%
Pb 220.353†	1721.2	0.2350	mg/L	0.00049	1.175	mg/L	0.0024	0.21%
Sb 206.836†	16.5	0.00474	mg/L	0.001568	0.02368	mg/L	0.007839	33.10%
Se 196.026†	20.0	0.01335	mg/L	0.003491	0.06677	mg/L	0.017455	26.14%
Si 288.158†	2923.8	1.361	mg/L	0.0023	6.807	mg/L	0.0114	0.17%
Sn 189.927†	-36.0	-0.00641	mg/L	0.000870	-0.03203	mg/L	0.004351	13.58%
Sr 421.552†	246355.3	0.2630	mg/L	0.00116	1.315	mg/L	0.0058	0.44%
Ti 334.903†	60402.7	2.897	mg/L	0.0140	14.49	mg/L	0.070	0.48%
Tl 190.801†	-24.7	0.00025	mg/L	0.001048	0.00123	mg/L	0.005241	425.28%
V 292.402†	18226.2	0.1354	mg/L	0.00162	0.6769	mg/L	0.00811	1.20%
Zn 206.200†	3230.5	0.7969	mg/L	0.00316	3.984	mg/L	0.0158	0.40%

Sequence No.: 18
Sample ID: VR32 ADUP SWC

Autosampler Location: 312
Date Collected: 11/16/2012 10:17:19 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ADUP SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2258859.7	100.1	%	0.74				0.74%
ScR 361.383	291427.6	101.9	%	0.98				0.96%
Ag 328.068†	-180.6	-0.00098	mg/L	0.000168	-0.00490	mg/L	0.000841	17.17%
Al 308.215†	185344.6	104.1	mg/L	2.26	520.3	mg/L	11.32	2.18%
As 188.979†	-35.8	0.06971	mg/L	0.002642	0.3486	mg/L	0.01321	3.79%
B 249.677†	84.4	0.01068	mg/L	0.000531	0.05338	mg/L	0.002653	4.97%
Ba 233.527†	7849.4	1.713	mg/L	0.0148	8.565	mg/L	0.0740	0.86%
Be 313.042†	2146.5	0.00316	mg/L	0.000038	0.01580	mg/L	0.000190	1.21%
Ca 317.933†	297797.0	20.97	mg/L	0.486	104.8	mg/L	2.43	2.32%
Cd 228.802†	308.7	0.00898	mg/L	0.000333	0.04492	mg/L	0.001666	3.71%
Co 228.616†	1688.0	0.04027	mg/L	0.000520	0.2013	mg/L	0.00260	1.29%
Cr 267.716†	859.6	0.1398	mg/L	0.00211	0.6990	mg/L	0.01053	1.51%
Cu 324.752†	21237.5	0.08548	mg/L	0.000181	0.4274	mg/L	0.00090	0.21%
Fe 273.955†	138096.9	105.3	mg/L	2.40	526.6	mg/L	11.98	2.27%
K 766.490†	18920.4	9.493	mg/L	0.2101	47.46	mg/L	1.051	2.21%
Mg 279.077†	35088.2	23.74	mg/L	0.528	118.7	mg/L	2.64	2.22%
Mn 257.610†	173937.9	4.808	mg/L	0.1119	24.04	mg/L	0.560	2.33%
Mo 202.031†	73.3	0.00342	mg/L	0.000123	0.01708	mg/L	0.000616	3.61%
Na 589.592†	12184.0	0.9563	mg/L	0.01839	4.781	mg/L	0.0920	1.92%
Na 330.237†	5.5	0.6358	mg/L	0.14328	3.179	mg/L	0.7164	22.54%
Ni 231.604†	548.6	0.1331	mg/L	0.00071	0.6656	mg/L	0.00357	0.54%
Pb 220.353†	1770.7	0.2420	mg/L	0.00142	1.210	mg/L	0.0071	0.59%
Sb 206.836†	11.0	0.00323	mg/L	0.003166	0.01614	mg/L	0.015831	98.11%
Se 196.026†	18.3	0.01221	mg/L	0.003090	0.06103	mg/L	0.015451	25.32%
Si 288.158†	2258.9	1.052	mg/L	0.0106	5.262	mg/L	0.0528	1.00%
Sn 189.927†	-41.6	-0.00763	mg/L	0.000700	-0.03814	mg/L	0.003502	9.18%
Sr 421.552†	273751.5	0.2922	mg/L	0.00604	1.461	mg/L	0.0302	2.07%
Ti 334.903†	65590.3	3.146	mg/L	0.0704	15.73	mg/L	0.352	2.24%
Tl 190.801†	-25.2	0.00060	mg/L	0.001117	0.00300	mg/L	0.005586	186.48%
V 292.402†	19485.2	0.1447	mg/L	0.00087	0.7233	mg/L	0.00437	0.60%
Zn 206.200†	3337.0	0.8232	mg/L	0.00465	4.116	mg/L	0.0232	0.56%

Sequence No.: 19
Sample ID: VR32 ASPK SWC

Autosampler Location: 313
Date Collected: 11/16/2012 10:21:20 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2267775.0	100.5	%	0.74				0.74%
ScR 361.383	288152.1	100.8	%	0.99				0.99%
Ag 328.068†	35393.3	0.2004	mg/L	0.00195	1.002	mg/L	0.0098	0.97%
Al 308.215†	185558.0	104.2	mg/L	0.86	520.9	mg/L	4.28	0.82%
As 188.979†	1450.8	0.8573	mg/L	0.00259	4.286	mg/L	0.0129	0.30%
B 249.677†	95.2	0.01162	mg/L	0.001174	0.05810	mg/L	0.005871	10.10%
Ba 233.527†	11720.8	2.566	mg/L	0.0301	12.83	mg/L	0.150	1.17%
Be 313.042†	133048.2	0.2000	mg/L	0.00124	0.9998	mg/L	0.00622	0.62%
Ca 317.933†	407610.2	28.70	mg/L	0.227	143.5	mg/L	1.14	0.79%
Cd 228.802†	7462.7	0.2297	mg/L	0.00052	1.149	mg/L	0.0026	0.23%
Co 228.616†	9152.5	0.2518	mg/L	0.00082	1.259	mg/L	0.0041	0.33%
Cr 267.716†	2209.3	0.3566	mg/L	0.00450	1.783	mg/L	0.0225	1.26%
Cu 324.752†	77635.0	0.3023	mg/L	0.00256	1.512	mg/L	0.0128	0.85%
Fe 273.955†	137361.3	104.8	mg/L	1.04	523.8	mg/L	5.21	1.00%
K 766.490†	26725.3	13.41	mg/L	0.100	67.04	mg/L	0.502	0.75%
Mg 279.077†	40422.4	27.36	mg/L	0.279	136.8	mg/L	1.40	1.02%
Mn 257.610†	183860.9	5.082	mg/L	0.0486	25.41	mg/L	0.243	0.96%
Mo 202.031†	79.1	0.00361	mg/L	0.000193	0.01806	mg/L	0.000965	5.34%
Na 589.592†	63258.3	4.965	mg/L	0.0361	24.82	mg/L	0.181	0.73%
Na 330.237†	124.9	4.729	mg/L	0.1993	23.65	mg/L	0.997	4.21%
Ni 231.604†	1353.0	0.3280	mg/L	0.00417	1.640	mg/L	0.0209	1.27%
Pb 220.353†	8229.0	1.049	mg/L	0.0041	5.247	mg/L	0.0207	0.39%
Sb 206.836†	20.8	0.00391	mg/L	0.001979	0.01956	mg/L	0.009895	50.59%
Se 196.026†	1181.7	0.7933	mg/L	0.00294	3.967	mg/L	0.0147	0.37%
Si 288.158†	2476.2	1.155	mg/L	0.0142	5.773	mg/L	0.0708	1.23%
Sn 189.927†	-51.2	-0.00910	mg/L	0.000826	-0.04549	mg/L	0.004132	9.08%
Sr 421.552†	466875.1	0.4984	mg/L	0.00421	2.492	mg/L	0.0210	0.84%
Ti 334.903†	66391.7	3.184	mg/L	0.0267	15.92	mg/L	0.133	0.84%
Tl 190.801†	1963.5	0.7764	mg/L	0.00237	3.882	mg/L	0.0119	0.31%
V 292.402†	46657.3	0.3531	mg/L	0.00355	1.766	mg/L	0.0177	1.00%
Zn 206.200†	4206.7	1.038	mg/L	0.0139	5.189	mg/L	0.0693	1.34%

Sequence No.: 20
Sample ID: ~~VR32 APOST SWC~~ 2-22-2-22
Dilution: 5.000000X
11-20

Autosampler Location: 314
Date Collected: 11/16/2012 10:25:07 AM
Data Type: Original

Nebulizer Parameters: VR32 APOST SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2240449.9	99.26	%	0.413				0.42%
ScR 361.383	285107.0	99.71	%	0.715				0.72%
Ag 328.068†	84603.8	0.4789	mg/L	0.00721	2.395	mg/L	0.0360	1.51%
Al 308.215†	193242.4	108.5	mg/L	1.06	542.5	mg/L	5.29	0.98%
As 188.979†	3536.3	1.959	mg/L	0.0221	9.793	mg/L	0.1105	1.13%
B 249.677†	95.0	0.01100	mg/L	0.001130	0.05500	mg/L	0.005651	10.27%
Ba 233.527†	17289.1	3.793	mg/L	0.0334	18.97	mg/L	0.167	0.88%
Be 313.042†	307237.9	0.4618	mg/L	0.00459	2.309	mg/L	0.0230	0.99%
Ca 317.933†	428479.5	30.17	mg/L	0.279	150.8	mg/L	1.39	0.92%
Cd 228.802†	17177.9	0.5293	mg/L	0.00645	2.646	mg/L	0.0323	1.22%
Co 228.616†	19382.6	0.5419	mg/L	0.00575	2.710	mg/L	0.0287	1.06%
Cr 267.716†	3973.4	0.6399	mg/L	0.00719	3.200	mg/L	0.0359	1.12%
Cu 324.752†	150970.1	0.5845	mg/L	0.00815	2.922	mg/L	0.0408	1.39%
Fe 273.955†	141965.9	108.3	mg/L	1.57	541.4	mg/L	7.86	1.45%
K 766.490†	37840.4	18.98	mg/L	0.128	94.92	mg/L	0.640	0.67%
Mg 279.077†	51548.6	34.90	mg/L	0.369	174.5	mg/L	1.84	1.06%
Mn 257.610†	205040.2	5.668	mg/L	0.0698	28.34	mg/L	0.349	1.23%
Mo 202.031†	77.4	0.00349	mg/L	0.000575	0.01747	mg/L	0.002874	16.45%
Na 589.592†	129420.7	10.16	mg/L	0.073	50.79	mg/L	0.367	0.72%
Na 330.237†	291.3	10.41	mg/L	0.360	52.05	mg/L	1.800	3.46%
Ni 231.604†	2466.2	0.5976	mg/L	0.00539	2.988	mg/L	0.0270	0.90%
Pb 220.353†	16945.3	2.140	mg/L	0.0217	10.70	mg/L	0.108	1.01%
Sb 206.836†	31.5	0.00415	mg/L	0.002091	0.02074	mg/L	0.010456	50.42%
Se 196.026†	2830.4	1.900	mg/L	0.0200	9.502	mg/L	0.0998	1.05%
Si 288.158†	3129.4	1.460	mg/L	0.0246	7.301	mg/L	0.1232	1.69%
Sn 189.927†	-47.2	-0.00785	mg/L	0.000324	-0.03925	mg/L	0.001621	4.13%
Sr 421.552†	692965.8	0.7398	mg/L	0.00683	3.699	mg/L	0.0341	0.92%
Ti 334.903†	64649.4	3.100	mg/L	0.0325	15.50	mg/L	0.162	1.05%
Tl 190.801†	4673.1	1.834	mg/L	0.0180	9.170	mg/L	0.0901	0.98%
V 292.402†	81840.2	0.6230	mg/L	0.00817	3.115	mg/L	0.0408	1.31%
Zn 206.200†	5332.7	1.316	mg/L	0.0176	6.578	mg/L	0.0879	1.34%

Sequence No.: 21
Sample ID: VR32 L SWC

Autosampler Location: 315
Date Collected: 11/16/2012 10:28:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2241870.5	99.32	%	0.252				0.25%
ScR 361.383	285688.7	99.92	%	1.744				1.75%
Ag 328.068†	-12.0	-0.00002	mg/L	0.000168	-0.00011	mg/L	0.000842	772.65%
Al 308.215†	139525.2	78.34	mg/L	0.590	391.7	mg/L	2.95	0.75%
As 188.979†	-75.9	0.07352	mg/L	0.000772	0.3676	mg/L	0.00386	1.05%
B 249.677†	128.5	0.01620	mg/L	0.000486	0.08100	mg/L	0.002431	3.00%
Ba 233.527†	16971.6	3.717	mg/L	0.0579	18.59	mg/L	0.290	1.56%
Be 313.042†	2116.0	0.00310	mg/L	0.000074	0.01550	mg/L	0.000368	2.38%
Ca 317.933†	844026.3	59.42	mg/L	0.395	297.1	mg/L	1.97	0.66%
Cd 228.802†	1625.6	0.05046	mg/L	0.000104	0.2523	mg/L	0.00052	0.21%
Co 228.616†	3466.7	0.08816	mg/L	0.000305	0.4408	mg/L	0.00152	0.35%
Cr 267.716†	2334.7	0.3760	mg/L	0.00494	1.880	mg/L	0.0247	1.31%
Cu 324.752†	53505.1	0.2109	mg/L	0.00025	1.055	mg/L	0.0012	0.12%
Fe 273.955†	189271.1	144.4	mg/L	1.06	721.8	mg/L	5.32	0.74%
K 766.490†	34203.1	17.16	mg/L	0.203	85.80	mg/L	1.015	1.18%
Mg 279.077†	69358.3	46.96	mg/L	0.334	234.8	mg/L	1.67	0.71%
Mn 257.610†	348969.7	9.646	mg/L	0.0702	48.23	mg/L	0.351	0.73%
Mo 202.031†	112.8	0.00496	mg/L	0.000375	0.02480	mg/L	0.001876	7.56%
Na 589.592†	4771.3	0.3745	mg/L	0.00153	1.872	mg/L	0.0077	0.41%
Na 330.237†	-12.2	-0.3171	mg/L	0.04777	-1.585	mg/L	0.2388	15.06%
Ni 231.604†	1172.3	0.2845	mg/L	0.00603	1.422	mg/L	0.0301	2.12%
Pb 220.353†	15280.2	1.923	mg/L	0.0086	9.615	mg/L	0.0428	0.45%
Sb 206.836†	44.7	0.01057	mg/L	0.001086	0.05284	mg/L	0.005430	10.28%
Se 196.026†	13.0	0.00859	mg/L	0.001729	0.04296	mg/L	0.008646	20.13%
Si 288.158†	2138.7	0.9996	mg/L	0.01572	4.998	mg/L	0.0786	1.57%
Sn 189.927†	-41.2	-0.00256	mg/L	0.001223	-0.01278	mg/L	0.006116	47.86%
Sr 421.552†	467519.9	0.4991	mg/L	0.00294	2.495	mg/L	0.0147	0.59%
Ti 334.903†	85682.3	4.108	mg/L	0.0274	20.54	mg/L	0.137	0.67%
Tl 190.801†	-21.3	0.00588	mg/L	0.001727	0.02939	mg/L	0.008636	29.39%
V 292.402†	21033.7	0.1563	mg/L	0.00043	0.7817	mg/L	0.00217	0.28%
Zn 206.200†	10204.8	2.517	mg/L	0.0419	12.59	mg/L	0.209	1.66%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/16/2012 10:32:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2199777.5	97.46	%	0.705				0.72%
ScR 361.383	274493.3	96.00	%	0.742				0.77%
Ag 328.068†	178100.1	1.008	mg/L	0.0097	1.008	mg/L	0.0097	0.96%
Al 308.215†	3790.5	2.093	mg/L	0.0278	2.093	mg/L	0.0278	1.33%
As 188.979†	3762.9	2.019	mg/L	0.0205	2.019	mg/L	0.0205	1.02%
B 249.677†	7776.1	0.9915	mg/L	0.01126	0.9915	mg/L	0.01126	1.14%
Ba 233.527†	4903.7	1.080	mg/L	0.0061	1.080	mg/L	0.0061	0.56%
Be 313.042†	645145.2	0.9699	mg/L	0.00944	0.9699	mg/L	0.00944	0.97%
Ca 317.933†	30184.6	2.125	mg/L	0.0195	2.125	mg/L	0.0195	0.92%
Cd 228.802†	33947.8	1.059	mg/L	0.0092	1.059	mg/L	0.0092	0.87%
Co 228.616†	37015.0	1.048	mg/L	0.0100	1.048	mg/L	0.0100	0.96%
Cr 267.716†	6578.2	1.059	mg/L	0.0094	1.059	mg/L	0.0094	0.89%
Cu 324.752†	268679.8	1.033	mg/L	0.0088	1.033	mg/L	0.0088	0.86%
Fe 273.955†	2814.0	2.139	mg/L	0.0124	2.139	mg/L	0.0124	0.58%
K 766.490†	40847.1	20.49	mg/L	0.188	20.49	mg/L	0.188	0.92%
Mg 279.077†	3093.4	2.105	mg/L	0.0124	2.105	mg/L	0.0124	0.59%
Mn 257.610†	38361.5	1.061	mg/L	0.0078	1.061	mg/L	0.0078	0.74%
Mo 202.031†	21127.2	1.053	mg/L	0.0082	1.053	mg/L	0.0082	0.78%
Na 589.592†	642349.7	50.42	mg/L	0.471	50.42	mg/L	0.471	0.93%
Na 330.237†	1524.0	52.94	mg/L	0.456	52.94	mg/L	0.456	0.86%
Ni 231.604†	4177.2	1.014	mg/L	0.0029	1.014	mg/L	0.0029	0.28%
Pb 220.353†	16450.2	2.057	mg/L	0.0166	2.057	mg/L	0.0166	0.81%
Sb 206.836†	7107.8	2.173	mg/L	0.0140	2.173	mg/L	0.0140	0.65%
Se 196.026†	2936.4	1.971	mg/L	0.0130	1.971	mg/L	0.0130	0.66%
Si 288.158†	4642.4	2.156	mg/L	0.0147	2.156	mg/L	0.0147	0.68%
Sn 189.927†	4022.3	1.033	mg/L	0.0084	1.033	mg/L	0.0084	0.81%
Sr 421.552†	918881.6	0.9809	mg/L	0.00872	0.9809	mg/L	0.00872	0.89%
Ti 334.903†	22717.1	1.089	mg/L	0.0084	1.089	mg/L	0.0084	0.77%
Tl 190.801†	5145.8	2.004	mg/L	0.0115	2.004	mg/L	0.0115	0.58%
V 292.402†	135813.7	1.042	mg/L	0.0100	1.042	mg/L	0.0100	0.96%
Zn 206.200†	4227.3	1.043	mg/L	0.0107	1.043	mg/L	0.0107	1.03%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/16/2012 10:36:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206241.1	97.74	%	1.512				1.55%
ScR 361.383	279930.4	97.90	%	1.042				1.06%
Ag 328.068†	69.2	0.00039	mg/L	0.000225	0.00039	mg/L	0.000225	57.53%
Al 308.215†	25.2	0.01412	mg/L	0.005460	0.01412	mg/L	0.005460	38.66%
As 188.979†	-2.9	-0.00153	mg/L	0.001874	-0.00153	mg/L	0.001874	122.61%
B 249.677†	11.8	0.00150	mg/L	0.000435	0.00150	mg/L	0.000435	28.95%
Ba 233.527†	2.1	0.00047	mg/L	0.001240	0.00047	mg/L	0.001240	264.99%
Be 313.042†	90.2	0.00014	mg/L	0.000045	0.00014	mg/L	0.000045	33.08%
Ca 317.933†	35.1	0.00247	mg/L	0.000666	0.00247	mg/L	0.000666	26.95%
Cd 228.802†	-8.8	-0.00027	mg/L	0.000119	-0.00027	mg/L	0.000119	44.28%
Co 228.616†	-19.3	-0.00055	mg/L	0.000083	-0.00055	mg/L	0.000083	15.04%
Cr 267.716†	-11.8	-0.00189	mg/L	0.000839	-0.00189	mg/L	0.000839	44.28%
Cu 324.752†	94.2	0.00036	mg/L	0.000074	0.00036	mg/L	0.000074	20.57%
Fe 273.955†	12.2	0.00929	mg/L	0.000626	0.00929	mg/L	0.000626	6.74%
K 766.490†	45.5	0.02285	mg/L	0.005779	0.02285	mg/L	0.005779	25.29%
Mg 279.077†	3.7	0.00253	mg/L	0.002254	0.00253	mg/L	0.002254	89.20%
Mn 257.610†	8.3	0.00023	mg/L	0.000162	0.00023	mg/L	0.000162	70.97%
Mo 202.031†	15.5	0.00077	mg/L	0.000227	0.00077	mg/L	0.000227	29.42%
Na 589.592†	23.5	0.00185	mg/L	0.002659	0.00185	mg/L	0.002659	144.05%
Na 330.237†	-14.7	-0.5103	mg/L	0.40102	-0.5103	mg/L	0.40102	78.58%
Ni 231.604†	-4.0	-0.00097	mg/L	0.002039	-0.00097	mg/L	0.002039	209.61%
Pb 220.353†	5.6	0.00070	mg/L	0.000472	0.00070	mg/L	0.000472	67.95%
Sb 206.836†	2.4	0.00076	mg/L	0.000608	0.00076	mg/L	0.000608	79.94%
Se 196.026†	0.9	0.00059	mg/L	0.003326	0.00059	mg/L	0.003326	561.48%
Si 288.158†	6.2	0.00288	mg/L	0.000784	0.00288	mg/L	0.000784	27.20%
Sn 189.927†	-1.1	-0.00028	mg/L	0.000451	-0.00028	mg/L	0.000451	159.08%
Sr 421.552†	87.2	0.00009	mg/L	0.000020	0.00009	mg/L	0.000020	21.73%
Ti 334.903†	14.1	0.00067	mg/L	0.000930	0.00067	mg/L	0.000930	137.81%
Tl 190.801†	-5.1	-0.00200	mg/L	0.002356	-0.00200	mg/L	0.002356	117.68%
V 292.402†	-37.1	-0.00029	mg/L	0.000145	-0.00029	mg/L	0.000145	49.85%
Zn 206.200†	-0.5	-0.00011	mg/L	0.000531	-0.00011	mg/L	0.000531	470.95%

Sequence No.: 24
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 10:40:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2194544.8	97.22	%	0.185				0.19%
ScR 361.383	278645.3	97.45	%	2.509				2.57%
Ag 328.068†	560.6	0.00317	mg/L	0.000037	0.00317	mg/L	0.000037	1.18%
Al 308.215†	106.1	0.05946	mg/L	0.003665	0.05946	mg/L	0.003665	6.16%
As 188.979†	94.2	0.05001	mg/L	0.001108	0.05001	mg/L	0.001108	2.22%
B 249.677†	162.9	0.02079	mg/L	0.000428	0.02079	mg/L	0.000428	2.06%
Ba 233.527†	13.3	0.00293	mg/L	0.000685	0.00293	mg/L	0.000685	23.41%
Be 313.042†	661.0	0.00099	mg/L	0.000074	0.00099	mg/L	0.000074	7.48%
Ca 317.933†	717.9	0.05054	mg/L	0.001905	0.05054	mg/L	0.001905	3.77%
Cd 228.802†	73.4	0.00199	mg/L	0.000087	0.00199	mg/L	0.000087	4.35%
Co 228.616†	105.9	0.00299	mg/L	0.000215	0.00299	mg/L	0.000215	7.20%
Cr 267.716†	26.0	0.00418	mg/L	0.000596	0.00418	mg/L	0.000596	14.26%
Cu 324.752†	648.9	0.00249	mg/L	0.000130	0.00249	mg/L	0.000130	5.23%
Fe 273.955†	75.6	0.05763	mg/L	0.001077	0.05763	mg/L	0.001077	1.87%
K 766.490†	1009.0	0.5062	mg/L	0.02489	0.5062	mg/L	0.02489	4.92%
Mg 279.077†	85.7	0.05812	mg/L	0.005315	0.05812	mg/L	0.005315	9.14%
Mn 257.610†	38.2	0.00106	mg/L	0.000107	0.00106	mg/L	0.000107	10.13%
Mo 202.031†	110.8	0.00552	mg/L	0.000073	0.00552	mg/L	0.000073	1.33%
Na 589.592†	6061.9	0.4758	mg/L	0.01122	0.4758	mg/L	0.01122	2.36%
Na 330.237†	2.4	0.08126	mg/L	0.354596	0.08126	mg/L	0.354596	436.35%
Ni 231.604†	35.0	0.00851	mg/L	0.001515	0.00851	mg/L	0.001515	17.80%
Pb 220.353†	174.9	0.02188	mg/L	0.001641	0.02188	mg/L	0.001641	7.50%
Sb 206.836†	178.5	0.05463	mg/L	0.001245	0.05463	mg/L	0.001245	2.28%
Se 196.026†	78.7	0.05284	mg/L	0.001904	0.05284	mg/L	0.001904	3.60%
Si 288.158†	137.1	0.06368	mg/L	0.004790	0.06368	mg/L	0.004790	7.52%
Sn 189.927†	37.3	0.00959	mg/L	0.001111	0.00959	mg/L	0.001111	11.58%
Sr 421.552†	906.3	0.00097	mg/L	0.000053	0.00097	mg/L	0.000053	5.49%
Ti 334.903†	111.6	0.00535	mg/L	0.000277	0.00535	mg/L	0.000277	5.19%
Tl 190.801†	124.3	0.04859	mg/L	0.000928	0.04859	mg/L	0.000928	1.91%
V 292.402†	385.7	0.00296	mg/L	0.000145	0.00296	mg/L	0.000145	4.89%
Zn 206.200†	36.9	0.00910	mg/L	0.000445	0.00910	mg/L	0.000445	4.89%

Sequence No.: 25
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 10:44:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2156626.1	95.54	%	0.438				0.46%
ScR 361.383	275282.3	96.28	%	0.489				0.51%
Ag 328.068†	-133.3	-0.00075	mg/L	0.000224	-0.00075	mg/L	0.000224	29.82%
Al 308.215†	362630.4	203.6	mg/L	0.14	203.6	mg/L	0.14	0.07%
As 188.979†	40.6	0.01576	mg/L	0.002516	0.01576	mg/L	0.002516	15.96%
B 249.677†	-21.0	-0.00267	mg/L	0.001853	-0.00267	mg/L	0.001853	69.29%
Ba 233.527†	139.9	-0.00162	mg/L	0.000210	-0.00162	mg/L	0.000210	12.94%
Be 313.042†	105.0	0.00016	mg/L	0.000030	0.00016	mg/L	0.000030	19.59%
Ca 317.933†	1446737.6	101.9	mg/L	0.16	101.9	mg/L	0.16	0.16%
Cd 228.802†	57.8	-0.00020	mg/L	0.000157	-0.00020	mg/L	0.000157	77.33%
Co 228.616†	61.5	-0.00085	mg/L	0.000230	-0.00085	mg/L	0.000230	27.00%
Cr 267.716†	4.8	-0.00151	mg/L	0.000889	-0.00151	mg/L	0.000889	59.09%
Cu 324.752†	-1974.4	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	25.63%
Fe 273.955†	259991.2	198.3	mg/L	0.35	198.3	mg/L	0.35	0.18%
K 766.490†	28.7	0.01438	mg/L	0.006419	0.01438	mg/L	0.006419	44.65%
Mg 279.077†	155846.5	105.6	mg/L	1.66	105.6	mg/L	1.66	1.58%
Mn 257.610†	27.6	0.00071	mg/L	0.000181	0.00071	mg/L	0.000181	25.37%
Mo 202.031†	57.5	0.00176	mg/L	0.000165	0.00176	mg/L	0.000165	9.33%
Na 589.592†	130.5	0.01024	mg/L	0.003638	0.01024	mg/L	0.003638	35.52%
Na 330.237†	-22.3	-0.7765	mg/L	0.13838	-0.7765	mg/L	0.13838	17.82%
Ni 231.604†	1.7	0.00042	mg/L	0.000176	0.00042	mg/L	0.000176	41.49%
Pb 220.353†	-316.5	0.00102	mg/L	0.001663	0.00102	mg/L	0.001663	163.24%
Sb 206.836†	26.8	0.00802	mg/L	0.001448	0.00802	mg/L	0.001448	18.05%
Se 196.026†	26.0	0.01742	mg/L	0.002816	0.01742	mg/L	0.002816	16.16%
Si 288.158†	-30.5	-0.00138	mg/L	0.003712	-0.00138	mg/L	0.003712	269.65%
Sn 189.927†	-83.0	-0.00869	mg/L	0.000514	-0.00869	mg/L	0.000514	5.92%
Sr 421.552†	3638.9	0.00388	mg/L Conf.	0.000074	0.00388	mg/L	0.000074	1.91%
Ti 334.903†	152.2	0.00244	mg/L	0.000552	0.00244	mg/L	0.000552	22.63%
Tl 190.801†	-64.7	-0.00413	mg/L	0.003476	-0.00413	mg/L	0.003476	84.06%
V 292.402†	1405.4	0.00380	mg/L	0.000376	0.00380	mg/L	0.000376	9.90%
Zn 206.200†	16.7	0.00412	mg/L	0.000579	0.00412	mg/L	0.000579	14.04%

Sequence No.: 26
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 10:49:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227176.1	98.67	%	0.400				0.41%
ScR 361.383	275651.0	96.41	%	1.436				1.49%
Ag 328.068†	176615.4	0.9997	mg/L	0.00274	0.9997	mg/L	0.00274	0.27%
Al 308.215†	359661.8	201.9	mg/L	1.47	201.9	mg/L	1.47	0.73%
As 188.979†	1911.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.76%
B 249.677†	-9.7	-0.00334	mg/L	0.000583	-0.00334	mg/L	0.000583	17.45%
Ba 233.527†	4975.4	1.064	mg/L	0.0122	1.064	mg/L	0.0122	1.15%
Be 313.042†	649735.1	0.9768	mg/L	0.00231	0.9768	mg/L	0.00231	0.24%
Ca 317.933†	1451145.2	102.2	mg/L	0.29	102.2	mg/L	0.29	0.29%
Cd 228.802†	33114.8	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Co 228.616†	36106.3	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Cr 267.716†	6579.8	1.057	mg/L	0.0142	1.057	mg/L	0.0142	1.34%
Cu 324.752†	266365.5	1.032	mg/L	0.0050	1.032	mg/L	0.0050	0.48%
Fe 273.955†	260344.1	198.6	mg/L	1.06	198.6	mg/L	1.06	0.53%
K 766.490†	-16.3	-0.00817	mg/L	0.016399	-0.00817	mg/L	0.016399	200.84%
Mg 279.077†	150792.3	102.2	mg/L	0.48	102.2	mg/L	0.48	0.47%
Mn 257.610†	35986.7	0.9948	mg/L	0.00461	0.9948	mg/L	0.00461	0.46%
Mo 202.031†	47.2	0.00119	mg/L	0.000498	0.00119	mg/L	0.000498	41.79%
Na 589.592†	342.5	0.02688	mg/L	0.000553	0.02688	mg/L	0.000553	2.06%
Na 330.237†	-16.2	-0.8821	mg/L	0.10893	-0.8821	mg/L	0.10893	12.35%
Ni 231.604†	4063.8	0.9862	mg/L	0.01456	0.9862	mg/L	0.01456	1.48%
Pb 220.353†	7570.0	0.9869	mg/L	0.00426	0.9869	mg/L	0.00426	0.43%
Sb 206.836†	3433.5	1.039	mg/L	0.0012	1.039	mg/L	0.0012	0.11%
Se 196.026†	1486.3	0.9972	mg/L	0.00585	0.9972	mg/L	0.00585	0.59%
Si 288.158†	-34.5	0.00013	mg/L	0.001803	0.00013	mg/L	0.001803	>999.9%
Sn 189.927†	-87.2	-0.00923	mg/L	0.001031	-0.00923	mg/L	0.001031	11.18%
Sr 421.552†	3649.2	0.00390	mg/L	Cal. 0.000081	0.00390	mg/L	0.000081	2.08%
Ti 334.903†	150.9	0.00215	mg/L	0.000192	0.00215	mg/L	0.000192	8.90%
Tl 190.801†	2366.3	0.9373	mg/L	0.00224	0.9373	mg/L	0.00224	0.24%
V 292.402†	130937.5	0.9976	mg/L	0.00376	0.9976	mg/L	0.00376	0.38%
Zn 206.200†	3934.0	0.9704	mg/L	0.01123	0.9704	mg/L	0.01123	1.16%

Sequence No.: 27
Sample ID: CV 4

Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 10:52:58 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2245873.8	99.50	%	0.811				0.82%
ScR 361.383	283315.6	99.09	%	0.306				0.31%
Ag 328.068†	174930.5	0.9902	mg/L	0.00619	0.9902	mg/L	0.00619	0.62%
Al 308.215†	3773.8	2.084	mg/L	0.0143	2.084	mg/L	0.0143	0.69%
As 188.979†	3729.4	1.999	mg/L	0.0206	1.999	mg/L	0.0206	1.03%
B 249.677†	7658.5	0.9765	mg/L	0.00295	0.9765	mg/L	0.00295	0.30%
Ba 233.527†	4847.2	1.068	mg/L	0.0052	1.068	mg/L	0.0052	0.49%
Be 313.042†	638772.9	0.9603	mg/L	0.00684	0.9603	mg/L	0.00684	0.71%
Ca 317.933†	28806.7	2.028	mg/L	0.0119	2.028	mg/L	0.0119	0.59%
Cd 228.802†	33460.4	1.044	mg/L	0.0067	1.044	mg/L	0.0067	0.64%
Co 228.616†	36612.0	1.036	mg/L	0.0038	1.036	mg/L	0.0038	0.37%
Cr 267.716†	6557.1	1.055	mg/L	0.0055	1.055	mg/L	0.0055	0.52%
Cu 324.752†	262464.5	1.009	mg/L	0.0050	1.009	mg/L	0.0050	0.50%
Fe 273.955†	2800.1	2.129	mg/L	0.0222	2.129	mg/L	0.0222	1.04%
K 766.490†	40043.1	20.09	mg/L	0.077	20.09	mg/L	0.077	0.38%
Mg 279.077†	3104.6	2.113	mg/L	0.0057	2.113	mg/L	0.0057	0.27%
Mn 257.610†	36428.0	1.007	mg/L	0.0046	1.007	mg/L	0.0046	0.46%
Mo 202.031†	20878.4	1.040	mg/L	0.0100	1.040	mg/L	0.0100	0.96%
Na 589.592†	624581.9	49.02	mg/L	0.298	49.02	mg/L	0.298	0.61%
Na 330.237†	1498.3	52.03	mg/L	0.230	52.03	mg/L	0.230	0.44%
Ni 231.604†	4145.1	1.006	mg/L	0.0047	1.006	mg/L	0.0047	0.46%
Pb 220.353†	16296.0	2.038	mg/L	0.0172	2.038	mg/L	0.0172	0.84%
Sb 206.836†	7007.4	2.142	mg/L	0.0215	2.142	mg/L	0.0215	1.00%
Se 196.026†	2913.8	1.956	mg/L	0.0143	1.956	mg/L	0.0143	0.73%
Si 288.158†	4550.0	2.113	mg/L	0.0054	2.113	mg/L	0.0054	0.26%
Sn 189.927†	3981.5	1.023	mg/L	0.0089	1.023	mg/L	0.0089	0.87%
Sr 421.552†	897817.7	0.9584	mg/L	0.00657	0.9584	mg/L	0.00657	0.69%
Ti 334.903†	21436.6	1.027	mg/L	0.0065	1.027	mg/L	0.0065	0.64%
Tl 190.801†	5089.8	1.982	mg/L	0.0182	1.982	mg/L	0.0182	0.92%
V 292.402†	133864.0	1.027	mg/L	0.0060	1.027	mg/L	0.0060	0.59%
Zn 206.200†	4224.6	1.042	mg/L	0.0062	1.042	mg/L	0.0062	0.60%

Sequence No.: 28
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 11/16/2012 10:57:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2282848.4	101.1	%	0.71				0.70%
ScR 361.383	289522.5	101.3	%	0.80				0.79%
Ag 328.068†	49.8	0.00028	mg/L	0.000263	0.00028	mg/L	0.000263	93.38%
Al 308.215†	26.0	0.01462	mg/L	0.000506	0.01462	mg/L	0.000506	3.46%
As 188.979†	0.9	0.00048	mg/L	0.001711	0.00048	mg/L	0.001711	356.99%
B 249.677†	16.0	0.00204	mg/L	0.000799	0.00204	mg/L	0.000799	39.18%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000450	-0.00043	mg/L	0.000450	105.66%
Be 313.042†	122.5	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.37%
Ca 317.933†	75.1	0.00529	mg/L	0.000179	0.00529	mg/L	0.000179	3.38%
Cd 228.802†	-8.7	-0.00028	mg/L	0.000156	-0.00028	mg/L	0.000156	56.20%
Co 228.616†	-11.3	-0.00032	mg/L	0.000035	-0.00032	mg/L	0.000035	10.98%
Cr 267.716†	-7.4	-0.00119	mg/L	0.000597	-0.00119	mg/L	0.000597	50.09%
Cu 324.752†	104.1	0.00040	mg/L	0.000121	0.00040	mg/L	0.000121	30.32%
Fe 273.955†	15.4	0.01178	mg/L	0.000655	0.01178	mg/L	0.000655	5.56%
K 766.490†	-4.7	-0.00236	mg/L	0.024789	-0.00236	mg/L	0.024789	>999.9%
Mg 279.077†	8.8	0.00600	mg/L	0.002743	0.00600	mg/L	0.002743	45.75%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000105	-0.00001	mg/L	0.000105	867.35%
Mo 202.031†	9.7	0.00048	mg/L	0.000181	0.00048	mg/L	0.000181	37.62%
Na 589.592†	74.7	0.00586	mg/L	0.004456	0.00586	mg/L	0.004456	75.99%
Na 330.237†	-10.4	-0.3604	mg/L	0.24897	-0.3604	mg/L	0.24897	69.08%
Ni 231.604†	-2.7	-0.00066	mg/L	0.001049	-0.00066	mg/L	0.001049	159.46%
Pb 220.353†	8.2	0.00103	mg/L	0.000615	0.00103	mg/L	0.000615	59.87%
Sb 206.836†	6.2	0.00191	mg/L	0.001988	0.00191	mg/L	0.001988	103.96%
Se 196.026†	3.5	0.00238	mg/L	0.002705	0.00238	mg/L	0.002705	113.63%
Si 288.158†	-1.8	-0.00082	mg/L	0.004960	-0.00082	mg/L	0.004960	607.93%
Sn 189.927†	-3.7	-0.00095	mg/L	0.001088	-0.00095	mg/L	0.001088	114.08%
Sr 421.552†	128.0	0.00014	mg/L	0.000012	0.00014	mg/L	0.000012	8.70%
Ti 334.903†	15.5	0.00074	mg/L	0.000522	0.00074	mg/L	0.000522	70.17%
Tl 190.801†	1.3	0.00053	mg/L	0.000746	0.00053	mg/L	0.000746	141.10%
V 292.402†	-16.6	-0.00013	mg/L	0.000098	-0.00013	mg/L	0.000098	74.03%
Zn 206.200†	-0.3	-0.00008	mg/L	0.000713	-0.00008	mg/L	0.000713	853.61%

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 1 **of** 7

All corrections made by analyst unless otherwise noted. 11.15.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓-2
		4			2992-6
		5			2991-3
		Rinse sample			
Z		ZZZZZZ			~~2926-7~~
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{67}Zn high
		LR200			
		LR300			Ag low
		B1			
		B2			
		B3			
		CCV2			Mo low
		CCB2			
		VR31 MB1	SWN	20	
		1 MB1SPK	1	1	✓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 2 of 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR31 A-L	SWN	100	~~fr Mn, Ba (500x)~~
		A		20	~~fr Mn, Ba 100x~~ (CAF)
		ADUP			Ni high RPD
		ASPK			Sb low %R
		APOST			0.01 mL PMSspk#2 (1/10) Sb 0.01mL PMS.spk#1 (1/10)
		C			~~fr Mn, Ba 100x~~
		D			~~fr Mn 100x~~
		E			~~fr Mn, Ba 100x~~
		CCV3			
		CCB3			
		VR31 J	SWN	20	~~fr Mn 100x~~
		F			
		H			
		K		100	~~Mn~~ Pb Zn
		K		20	
		L			~~fr Mn 100x~~
		I			
		G			
		B		400	~~Mn Ba~~ Zn
		B		20	
		CCV4			
		CCB4			
		VR30 MB1	SWN	20	
		MB1SPK			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 3 **of** 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 A-L	SWN	100 ✓	~~rr 1000x~~
		A		20	~~rr Mn, Ba 200x~~ (CAF)
		ADUP		✓	↓
		ASPK			PDSTL; Sb low % R ~~rr Mn, Ba 200x~~
		APOST			Sb
		B			
		C			
		D			
		CCV5			
		CCB5			
		VR32 MB1	SWN	20	rr Be
		↓ MB1SPK		✓	
		VR30 E			
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV6			Be high, Mo low
		CCB6			As2 high
		STD 0			
		CCV7			Be high; Ag, Mo low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 4 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB7			
		VR32 A-L	SWN	100	rr Be, Ag V=11.3%
		A		20	CAP
		ADUP			
		ASPK			Zn Sb low%R
		APOST			0.06mL PMSspk#1 1/10 0.06mL PMSspk#2 1/10 Sb; Zn
		B			rr Be, Ag
		C			
		D			
		E			rr V, Cr, Co (Sc high)
		F			
		CCV8			Be high, Ag low
		CCB8			
		VR33 MB1	SWN	20	rr Be, Ag
		↓ MB1SPK			
		VR32 G			
		H			
		I			
		J			
		K			
		L			rr V, Cr, Co (Sc high) rr Pb Zn (100x)
		VR33 B			
		↓ C			rr V, Cr, Co (Sc high) rr Pb, Zn
		CCV9			Mo, Ag low

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 5 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB9			
		VR33 A-L	SWN	100	(200x) (500x) Cd - 1641. rr Ag, Pb, Zn
		A		20	CAF
		ADUP			N: high RPD
		ASPK			Sb low % R
		APOST			Sb 0.06mL PMS spk #1 to 10 0.06mL PMS spk #2 to 10
		D			rr Ag
		E			rr Ag, Zn
		F			rr Ag
		G			
		H			
		CCV10			Mo, Ag low
		CCB10			
		VR34 MB1	SWN	20	rr Ag, Be
		MB1SPK			
		VR33 I			
		J			rr Zn, Pb 100x
		K			rr Zn 100x
		L			
		VR34 B			rr Pb (100x)
		C			
		D			rr Pb, Zn 100x
		E			
		CCV11			Be high; Mo, Ag low

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, November 15, 2012 11:25:14
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1275
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3053.4	3053.360	71.071	2.3	Standard
	Mg	24.0	29322.9	29322.904	322.760	1.1	Standard
	In	114.9	78650.2	78650.220	497.933	0.6	Standard
	Pb	208.0	34955.6	34955.628	120.271	0.3	Standard
	U	238.1	61022.0	61022.015	440.425	0.7	Standard
⌈	CeO	155.9	1000.7	0.013	0.000	3.8	Standard
| >	Ce	139.9	76266.2	76266.222	634.937	0.8	Standard
⌊	Ce++	70.0	657.5	0.009	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/15/2012 11:25:12 AM
Time: 11/15/2012 11:27:47 AM

ly Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3053.36
Obtained Intensity (Mg 23.985): 29322.90
Obtained Intensity (In 114.904): 78650.22
Obtained Intensity (Pb 207.977): 34955.63
Obtained Intensity (U 238.05): 61022.02
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.013 (=1000.66 / 76266.22)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=657.49 / 76266.22)

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/15/2012 11:17:32 AM
Time: 11/15/2012 11:19:44 AM

s Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.708)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

SmartTune Wizard - Summary

:imization Summary

ırtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

ırt Time: 11/15/2012 11:20:57 AM
l Time: 11/15/2012 11:25:08 AM

:oLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 11:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L				726304	0
	Be	9		ug/L				5	53
	C	13		ug/L				58801	3
	Cl	37		ug/L				3025336	4
>	Sc	45		ug/L				671354	1
	V	51		ug/L				5156	3
	V-1	51		ug/L				130	18
	Cr	52		ug/L				15247	2
	Cr	53		ug/L				115	5
	Mn	55		ug/L				250	8
	Co	59		ug/L				40	11
>	Ge	72		ug/L				457613	0
	Ni	60		ug/L				22	30
	Ni	62		ug/L				29	10
	Cu	63		ug/L				58	22
	Cu	65		ug/L				28	19
	Zn	66		ug/L				143	10
	Zn	67		ug/L				23	23
	Zn	68		ug/L				137	9
	As	75		ug/L				267	5
	As-1	75		ug/L				8149	1
	Se	82		ug/L				-5	14
	Se	78		ug/L				8278	1
	Mo	98		ug/L				17	21
	Y	89		ug/L				298590	2
	Kr	83		ug/L				554	4
>	In	115		ug/L				979916	1
	Ag	107		ug/L				15	17
	Cd	111		ug/L				63	6
	Cd	114		ug/L				30	9
	Sb	121		ug/L				102	39
	Sb	123		ug/L				72	14
	Ba	135		ug/L				11	13
	Ba	137		ug/L				17	10
>	Tb	159		ug/L				1160798	1
	Tl	205		ug/L				51	19
	Pb	208		ug/L				139	3
	Bi	209		ug/L				2367270	0
	Th	232		ug/L				21	59
	U	238		ug/L				3	41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:03:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	721999	0
	Be	9	0.200	ug/L	0.008	4	5	500	4
	C	13		ug/L			58801	61004	4
	Cl	37		ug/L			3025336	2900221	1
>	Sc	45		ug/L			671354	664677	2
	V	51	0.200	ug/L	0.030	14	5156	8058	3
	V-1	51	0.200	ug/L	0.013	6	130	2979	4
	Cr	52	0.500	ug/L	0.070	13	15247	21420	2
	Cr	53	0.500	ug/L	0.016	3	115	796	3
	Mn	55	0.500	ug/L	0.009	1	250	8460	2
	Co	59	0.200	ug/L	0.008	3	40	2660	0
>	Ge	72		ug/L			457613	458359	0
	Ni	60	0.500	ug/L	0.006	1	22	1424	1
	Ni	62	0.500	ug/L	0.031	6	29	219	5
	Cu	63	0.500	ug/L	0.003	0	58	3329	0
	Cu	65	0.500	ug/L	0.016	3	28	1508	2
	Zn	66	4.000	ug/L	0.074	1	143	7230	1
	Zn	67	4.000	ug/L	0.084	2	23	1119	2
	Zn	68	4.000	ug/L	0.105	2	137	5189	2
	As	75	0.200	ug/L	0.011	5	267	631	3
	As-1	75	0.200	ug/L	0.037	18	8149	8627	1
	Se	82	0.500	ug/L	0.027	5	-5	100	5
	Se	78	0.500	ug/L	0 090	17	8278	8635	1
	Mo	98	0.200	ug/L	0.006	2	17	886	2
	Y	89		ug/L			298590	302917	1
	Kr	83		ug/L			554	520	1
>	In	115		ug/L			979916	996805	0
	Ag	107	0.200	ug/L	0.001	0	15	3021	1
	Cd	111	0.100	ug/L	0.004	3	63	592	4
	Cd	114	0.100	ug/L	0.006	6	30	1237	6
	Sb	121	0.200	ug/L	0.006	2	102	3067	2
	Sb	123	0.200	ug/L	0.008	3	72	2282	3
	Ba	135	0.500	ug/L	0.004	0	11	2172	1
	Ba	137	0.500	ug/L	0.019	3	17	3761	3
>	Tb	159		ug/L			1160798	1148209	0
	Tl	205	0.200	ug/L	0.002	0	51	7419	0
	Pb	208	0.100	ug/L	0.001	0	139	5039	0
	Bi	209		ug/L			2367270	2396482	1
	Th	232	0.200	ug/L	0.003	1	21	8440	1
	U	238	0.200	ug/L	0.003	1	3	9178	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			726304	716986	1
	Be	9	10.000	ug/L	0 111	1	5	23410	2
	C	13		ug/L			58801	59693	6
	Cl	37		ug/L			3025336	2984447	0
>	Sc	45		ug/L			671354	674326	1
	V	51	10.000	ug/L	0.329	3	5156	143597	4
	V-1	51	10.000	ug/L	0.247	2	130	139693	3
	Cr	52	9.998	ug/L	0.079	0	15247	135864	1
	Cr	53	10.000	ug/L	0.488	4	115	14104	3
	Mn	55	10.000	ug/L	0.102	1	250	167408	2
	Co	59	10.000	ug/L	0.402	4	40	131071	2
>	Ge	72		ug/L			457613	466494	1
	Ni	60	9.999	ug/L	0.357	3	22	27973	2
	Ni	62	10.001	ug/L	0.253	2	29	4073	1
	Cu	63	9.999	ug/L	0.466	4	58	64397	2
	Cu	65	9.999	ug/L	0 131	1	28	29424	0
	Zn	66	9.955	ug/L	0.279	2	143	17603	1
	Zn	67	10.070	ug/L	0.071	0	23	2958	2
	Zn	68	9.958	ug/L	0.281	2	137	12610	0
	As	75	9.999	ug/L	0.082	0	267	15856	1
	As-1	75	9.998	ug/L	0.137	1	8149	23661	0
	Se	82	9.994	ug/L	0.150	1	-5	1757	1
	Se	78	9.984	ug/L	0.305	3	8278	12676	0
	Mo	98	10.000	ug/L	0.223	2	17	46183	0
	Y	89		ug/L			298590	304853	1
	Kr	83		ug/L			554	549	4
>	In	115		ug/L			979916	992778	1
	Ag	107	10.000	ug/L	0.156	1	15	149069	0
	Cd	111	10.000	ug/L	0.103	1	63	50207	0
	Cd	114	10.000	ug/L	0.224	2	30	124907	1
	Sb	121	10.000	ug/L	0.138	1	102	155372	0
	Sb	123	10.000	ug/L	0.320	3	72	118774	1
	Ba	135	10.000	ug/L	0.135	1	11	43103	0
	Ba	137	10.000	ug/L	0.163	1	17	73732	0
>	Tb	159		ug/L			1160798	1162542	0
	Tl	205	10.000	ug/L	0.132	1	51	352078	1
	Pb	208	10.000	ug/L	0.169	1	139	470524	0
	Bi	209		ug/L			2367270	2386666	1
	Th	232	10.000	ug/L	0.184	1	21	436902	1
	U	238	10.000	ug/L	0.143	1	3	458868	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:11:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	707275	1
	Be	**9**	**19.974**	ug/L	0.190	0	5	45872	0
	C	**13**		ug/L			58801	57702	2
	Cl	**37**		ug/L			3025336	3009285	0
>	**Sc**	**45**		ug/L			671354	673020	0
	V	**51**	**20.015**	ug/L	0.101	0	5156	282424	0
	V-1	**51**	**20.021**	ug/L	0.178	0	130	280146	0
	Cr	**52**	**19.955**	ug/L	0.128	0	15247	253280	0
	Cr	**53**	**19.977**	ug/L	0.428	2	115	27892	2
	Mn	**55**	**19.961**	ug/L	0.737	3	250	330718	3
	Co	**59**	**19.975**	ug/L	0.174	0	40	260070	1
>	**Ge**	**72**		ug/L			457613	463277	1
	Ni	**60**	**20.120**	ug/L	0.373	1	22	57253	0
	Ni	**62**	**19.957**	ug/L	0.411	2	29	7978	3
	Cu	**63**	**19.917**	ug/L	0.856	4	58	125250	2
	Cu	**65**	**19.971**	ug/L	0.412	2	28	57994	0
	Zn	**66**	**19.988**	ug/L	0.667	3	143	34885	2
	Zn	**67**	**19.876**	ug/L	0.492	2	23	5653	0
	Zn	**68**	**19.968**	ug/L	1.162	5	137	24828	3
	As	**75**	**20.031**	ug/L	0.164	0	267	31464	1
	As-1	**75**	**20.069**	ug/L	0.097	0	8149	39286	1
	Se	**82**	**19.982**	ug/L	0.385	1	-5	3481	0
	Se	**78**	**20.121**	ug/L	0.349	1	8278	17074	1
	Mo	**98**	**19.896**	ug/L	0.749	3	17	89370	2
	Y	**89**		ug/L			298590	308237	0
	Kr	**83**		ug/L			554	552	4
>	**In**	**115**		ug/L			979916	989356	0
	Ag	**107**	**19.915**	ug/L	0.503	2	15	290934	3
	Cd	**111**	**19.928**	ug/L	0.229	1	63	98242	0
	Cd	**114**	**19.906**	ug/L	0.159	0	30	243250	1
	Sb	**121**	**19.979**	ug/L	0.171	0	102	307996	0
	Sb	**123**	**19.936**	ug/L	0.116	0	72	232976	0
	Ba	**135**	**19.950**	ug/L	0.042	0	11	84844	0
	Ba	**137**	**19.946**	ug/L	0.275	1	17	144984	0
>	**Tb**	**159**		ug/L			1160798	1165022	1
	Tl	**205**	**19.967**	ug/L	0.432	2	51	699768	0
	Pb	**208**	**19.896**	ug/L	0.367	1	139	918823	0
	Bi	**209**		ug/L			2367270	2348870	0
	Th	**232**	**20.016**	ug/L	0.421	2	21	879029	1
	U	**238**	**19.921**	ug/L	0.270	1	3	901701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			726304	696747	0
	Be	**9**	**49.897**	ug/L	0.686	1	5	111740	1
	C	**13**		ug/L			58801	54239	1
	Cl	**37**		ug/L			3025336	3163386	3
>	**Sc**	**45**		ug/L			671354	669550	1
	V	**51**	**49.953**	ug/L	0.938	1	5156	690266	1
	V-1	**51**	**49.924**	ug/L	1.117	2	130	689391	1
	Cr	**52**	**49.941**	ug/L	0.626	1	15247	604281	1
	Cr	**53**	**49.846**	ug/L	1.163	2	115	68004	1
	Mn	**55**	**50.060**	ug/L	0.708	1	250	829657	1
	Co	**59**	**49.981**	ug/L	1.468	2	40	645933	1
>	**Ge**	**72**		ug/L			457613	451350	2
	Ni	**60**	**49.978**	ug/L	0.690	1	22	138232	1
	Ni	**62**	**50.065**	ug/L	1.302	2	29	19572	1
	Cu	**63**	**50.245**	ug/L	0.142	0	58	315663	2
	Cu	**65**	**50.084**	ug/L	1.326	2	28	142830	0
	Zn	**66**	**49.801**	ug/L	0.242	0	143	82900	2
	Zn	**67**	**49.945**	ug/L	2.045	4	23	13735	4
	Zn	**68**	**50.018**	ug/L	0.646	1	137	60532	1
	As	**75**	**50.171**	ug/L	0.732	1	267	77698	0
	As-1	**75**	**50.217**	ug/L	1.030	2	8149	85364	0
	Se	**82**	**50.031**	ug/L	0.981	1	-5	8527	0
	Se	**78**	**50.209**	ug/L	1.763	3	8278	29743	0
	Mo	**98**	**50.165**	ug/L	1.652	3	17	223173	1
	Y	**89**		ug/L			298590	300790	2
	Kr	**83**		ug/L			554	563	5
>	**In**	**115**		ug/L			979916	968693	1
	Ag	**107**	**49.690**	ug/L	0.746	1	15	689235	0
	Cd	**111**	**49.942**	ug/L	0.972	1	63	239540	0
	Cd	**114**	**49.889**	ug/L	0.348	0	30	590254	0
	Sb	**121**	**49.991**	ug/L	0.730	1	102	753665	0
	Sb	**123**	**49.934**	ug/L	0.921	1	72	567409	1
	Ba	**135**	**50.037**	ug/L	0.678	1	11	209096	0
	Ba	**137**	**50.124**	ug/L	0.813	1	17	361169	0
>	**Tb**	**159**		ug/L			1160798	1161518	0
	Tl	**205**	**49.835**	ug/L	0.270	0	51	1713158	0
	Pb	**208**	**49.789**	ug/L	0.286	0	139	2245124	0
	Bi	**209**		ug/L			2367270	2294195	0
	Th	**232**	**49.756**	ug/L	0.366	0	21	2126922	0
	U	**238**	**49.645**	ug/L	0.102	0	3	2163987	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:22:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	687365	3
	Be	9	98.884	ug/L	2.897	2	5	210487	0
	C	13		ug/L			58801	57400	3
	Cl	37		ug/L			3025336	3210120	1
>	Sc	45		ug/L			671354	654119	1
	V	51	100.575	ug/L	3.378	3	5156	1378884	2
	V-1	51	100.357	ug/L	3.857	3	130	1369972	2
	Cr	52	100.804	ug/L	0.438	0	15247	1208550	1
	Cr	53	100.092	ug/L	1.590	1	115	133715	0
	Mn	55	100.259	ug/L	0.882	0	250	1637308	1
	Co	59	100.111	ug/L	2.851	2	40	1268759	1
>	Ge	72		ug/L			457613	455029	0
	Ni	60	99.662	ug/L	1.501	1	22	274842	1
	Ni	62	99.528	ug/L	1.748	1	29	38602	1
	Cu	63	99.316	ug/L	1.591	1	58	614945	1
	Cu	65	99.163	ug/L	0.649	0	28	277436	0
	Zn	66	99.507	ug/L	1.250	1	143	164160	0
	Zn	67	99.083	ug/L	1.389	1	23	26643	1
	Zn	68	99.192	ug/L	1.199	1	137	117753	1
	As	75	99.617	ug/L	0.859	0	267	153343	0
	As-1	75	99.658	ug/L	0.850	0	8149	161104	0
	Se	82	99.163	ug/L	0.830	0	-5	16586	0
	Se	78	99.322	ug/L	0.696	0	8278	50334	0
	Mo	98	99.526	ug/L	0.646	0	17	439613	0
	Y	89		ug/L			298590	300499	0
	Kr	83		ug/L			554	599	2
>	In	115		ug/L			979916	944524	0
	Ag	107	99.198	ug/L	2.226	2	15	1306740	1
	Cd	111	99.485	ug/L	1.704	1	63	457400	1
	Cd	114	99.730	ug/L	1.497	1	30	1140177	0
	Sb	121	99.787	ug/L	0.890	0	102	1456513	0
	Sb	123	100.284	ug/L	0.778	0	72	1121824	1
	Ba	135	100.151	ug/L	0.666	0	11	410163	1
	Ba	137	100.195	ug/L	1.139	1	17	708572	0
>	Tb	159		ug/L			1160798	1140586	0
	Tl	205	99.199	ug/L	0.492	0	51	3261597	0
	Pb	208	99.379	ug/L	0.874	0	139	4311163	0
	Bi	209		ug/L			2367270	2201217	0
	Th	232	99.564	ug/L	1.210	1	21	4119387	0
	U	238	99.488	ug/L	0.549	0	3	4186821	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:29:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			726304	697054	2
Be	9	0.004	ug/L	0.003	64	5	14	37
C	13		ug/L			58801	54932	2
Cl	37		ug/L			3025336	3115327	1
Sc	45		ug/L			671354	652960	2
V	51	0.033	ug/L	0.012	36	5156	5458	1
V-1	51	0.012	ug/L	0.005	38	130	294	19
Cr	52	0.099	ug/L	0.033	33	15247	15991	0
Cr	53	0.032	ug/L	0.009	27	115	155	5
Mn	55	0.007	ug/L	0.005	72	250	350	20
Co	59	0.004	ug/L	0.004	106	40	85	56
Ge	72		ug/L			457613	460060	0
Ni	60	0.003	ug/L	0.006	196	22	31	51
Ni	62	0.105	ug/L	0.039	36	29	71	21
Cu	63	0.009	ug/L	0.004	44	58	116	22
Cu	65	0.003	ug/L	0.003	113	28	37	25
Zn	66	-0.011	ug/L	0.007	63	143	126	9
Zn	67	0.013	ug/L	0.024	184	23	27	23
Zn	68	-0.001	ug/L	0.004	252	137	136	3
As	75	0.004	ug/L	0.012	319	267	275	6
As-1	75	0.156	ug/L	0.030	19	8149	8435	0
Se	82	0.079	ug/L	0.042	52	-5	8	87
Se	78	0.569	ug/L	0.090	15	8278	8567	0
Mo	98	0.029	ug/L	0.008	27	17	145	24
Y	89		ug/L			298590	298582	0
Kr	83		ug/L			554	524	4
In	115		ug/L			979916	957945	0
Ag	107	0.007	ug/L	0.005	67	15	104	58
Cd	111	0.009	ug/L	0.005	52	63	104	21
Cd	114	0.004	ug/L	0.003	69	30	77	43
Sb	121	0.111	ug/L	0.008	7	102	1736	7
Sb	123	0.115	ug/L	0.007	5	72	1374	5
Ba	135	0.004	ug/L	0.004	105	11	26	59
Ba	137	0.004	ug/L	0.006	124	17	48	81
Tb	159		ug/L			1160798	1096676	2
Tl	205	0.022	ug/L	0.003	12	51	732	9
Pb	208	0.006	ug/L	0.008	124	139	390	81
Bi	209		ug/L			2367270	2301499	1
Th	232	0.136	ug/L	0.032	23	21	5414	22
U	238	0.007	ug/L	0.006	93	3	270	90

Sample Information

Sample Date/Time: Thursday, November 15, 2012 12:29:30
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9998**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.021	0.20	10	20	50	100
V-1	51	**1.0000**	0.021	0.20	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Co	59	**1.0000**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.010	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.029	0.20	10	20	50	100
Pb	208	**0.9999**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.036	0.20	10	20	50	100
U	238	**0.9999**	0.037	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICV~~ 222222
Sample Dil Factor: 11.15.12 MJT
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:37:24
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			0	690107	0
	Be	9	53.146	ug/L	0.766	1	0	113655	2
	C	13		ug/L			0	58734	1
	Cl	37		ug/L			0	3218935	3
>	Sc	45		ug/L			0	672341	1
	V	51	51.135	ug/L	1.411	2	0	718001	1
	V-1	51	51.269	ug/L	1.224	2	0	719375	1
	Cr	52	51.116	ug/L	1.808	3	0	621996	2
	Cr	53	51.554	ug/L	1.461	2	0	70724	1
	Mn	55	50.623	ug/L	0.324	0	0	849591	0
	Co	59	50.494	ug/L	1.283	2	0	657818	2
>	Ge	72		ug/L			0	469528	2
	Ni	60	51.045	ug/L	1.012	1	0	145194	1
	Ni	62	50.392	ug/L	0.923	1	0	20146	1
	Cu	63	50.431	ug/L	1.704	3	0	322032	2
	Cu	65	51.674	ug/L	1.650	3	0	149088	1
	Zn	66	49.950	ug/L	1.747	3	0	84910	1
	Zn	67	51.040	ug/L	2.180	4	0	14137	1
	Zn	68	49.942	ug/L	0.951	1	0	61094	2
	As	75	49.536	ug/L	0.730	1	0	78525	1
	As-1	75	54.687	ug/L	0.896	1	0	86610	1
	Se	82	77.809	ug/L	2.086	2	0	13427	0
	Se	78	97.432	ug/L	2.602	2	0	42596	0
	Mo	98	47.414	ug/L	1.368	2	0	216012	1
	Y	89		ug/L			0	303652	0
	Kr	83		ug/L			0	553	2
>	In	115		ug/L			0	972119	1
	Ag	107	49.472	ug/L	0.758	1	0	670726	1
	Cd	111	49.450	ug/L	0.135	0	0	233986	1
	Cd	114	49.954	ug/L	0.778	1	0	587773	1
	Sb	121	49.688	ug/L	0.336	0	0	746416	1
	Sb	123	49.378	ug/L	1.080	2	0	568383	1
	Ba	135	50.653	ug/L	0.778	1	0	213478	0
	Ba	137	50.086	ug/L	0.201	0	0	364553	0
>	Tb	159		ug/L			0	1145568	0
	Tl	205	52.835	ug/L	0.080	0	0	1744757	0
	Pb	208	52.193	ug/L	0.627	1	0	2273959	0
	Bi	209		ug/L			0	2233958	1
	Th	232	52.401	ug/L	0.533	1	0	2177561	0
	U	238	53.356	ug/L	0.280	0	0	2255260	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:45:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	679842	0
	Be	9	52.033	ug/L	0.897	1	5	109609	1
	C	13		ug/L			58801	58588	3
	Cl	37		ug/L			3025336	3137156	1
>	Sc	45		ug/L			671354	663548	1
	V	51	50.369	ug/L	1.559	3	5156	703055	2
	V-1	51	51.026	ug/L	1.308	2	130	706690	1
	Cr	52	49.148	ug/L	1.798	3	15247	605277	2
	Cr	53	51.294	ug/L	1.325	2	115	69558	1
	Mn	55	49.800	ug/L	1.636	3	250	824882	1
	Co	59	50.757	ug/L	1.909	3	40	652468	2
>	Ge	72		ug/L			457613	473522	2
	Ni	60	49.094	ug/L	1.705	3	22	140845	3
	Ni	62	49.307	ug/L	0.997	2	29	19910	1
	Cu	63	49.414	ug/L	1.923	3	58	318202	1
	Cu	65	49.824	ug/L	1.135	2	28	145015	0
	Zn	66	49.078	ug/L	2.006	4	143	84273	1
	Zn	67	49.714	ug/L	2.289	4	23	13910	1
	Zn	68	48.338	ug/L	1.365	2	137	59753	0
	As	75	49.141	ug/L	2.527	5	267	78784	2
	As-1	75	49.011	ug/L	2.500	5	8149	86664	2
	Se	82	76.836	ug/L	3.394	4	-5	13361	1
	Se	78	76.378	ug/L	3.306	4	8278	42232	1
	Mo	98	46.387	ug/L	2.488	5	17	213021	2
	Y	89		ug/L			298590	300868	2
	Kr	83		ug/L			554	563	4
>	In	115		ug/L			979916	953436	0
	Ag	107	48.913	ug/L	0.733	1	15	650479	2
	Cd	111	49.593	ug/L	0.101	0	63	230208	0
	Cd	114	49.704	ug/L	0.452	0	30	573631	0
	Sb	121	49.579	ug/L	0.247	0	102	730567	1
	Sb	123	49.446	ug/L	0.673	1	72	558346	1
	Ba	135	50.215	ug/L	0.617	1	11	207610	2
	Ba	137	50.215	ug/L	0.489	0	17	358504	1
>	Tb	159		ug/L			1160798	1132838	0
	Tl	205	52.259	ug/L	0.886	1	51	1706490	1
	Pb	208	51.235	ug/L	0.802	1	139	2207482	0
	Bi	209		ug/L			2367270	2236728	0
	Th	232	51.732	ug/L	1.328	2	21	2125707	1
	U	238	52.606	ug/L	1.153	2	3	2198678	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669243	2
	Be	9	0.004	ug/L	0.004	115	5	13	66
	C	13		ug/L			58801	54183	1
	Cl	37		ug/L			3025336	3033736	1
>	Sc	45		ug/L			671354	641399	1
	V	51	0.023	ug/L	0.011	47	5156	5231	2
	V-1	51	0.006	ug/L	0.003	43	130	205	15
	Cr	52	0.079	ug/L	0.025	32	15247	15481	0
	Cr	53	0.024	ug/L	0.013	53	115	142	10
	Mn	55	0.004	ug/L	0.003	60	250	307	11
	Co	59	0.002	ug/L	0.002	92	40	59	32
>	Ge	72		ug/L			457613	463989	2
	Ni	60	-0.000	ug/L	0.002	32711	22	23	23
	Ni	62	0.122	ug/L	0.014	11	29	78	5
	Cu	63	0.010	ug/L	0.004	46	58	119	22
	Cu	65	-0.001	ug/L	0.001	94	28	25	9
	Zn	66	-0.004	ug/L	0.003	63	143	137	2
	Zn	67	-0.009	ug/L	0.008	92	23	21	11
	Zn	68	-0.002	ug/L	0.005	240	137	136	4
	As	75	-0.008	ug/L	0.038	451	267	257	20
	As-1	75	0.092	ug/L	0.158	173	8149	8401	0
	Se	82	-0.008	ug/L	0.105	1266	-5	-7	252
	Se	78	0.354	ug/L	0.540	152	8278	8543	0
	Mo	98	0.012	ug/L	0.001	11	17	69	9
	Y	89		ug/L			298590	293125	0
	Kr	83		ug/L			554	562	1
>	In	115		ug/L			979916	951777	1
	Ag	107	0.002	ug/L	0.001	39	15	41	26
	Cd	111	0.003	ug/L	0.001	21	63	76	2
	Cd	114	0.001	ug/L	0.002	109	30	46	40
	Sb	121	0.027	ug/L	0.006	23	102	491	17
	Sb	123	0.029	ug/L	0.006	19	72	393	15
	Ba	135	0.004	ug/L	0.009	200	11	29	122
	Ba	137	0.004	ug/L	0.007	167	17	47	109
>	Tb	159		ug/L			1160798	1078092	1
	Tl	205	0.009	ug/L	0.007	76	51	314	62
	Pb	208	0.005	ug/L	0.007	138	139	324	82
	Bi	209		ug/L			2367270	2257219	0
	Th	232	0.067	ug/L	0.010	14	21	2631	12
	U	238	0.004	ug/L	0.004	88	3	165	84

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:58:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672643	1
	Be	9	51.640	ug/L	1.204	2	5	107647	3
	C	13		ug/L			58801	54915	2
	Cl	37		ug/L			3025336	3145302	2
>	Sc	45		ug/L			671354	649221	1
	V	51	49.830	ug/L	0.563	1	5156	680651	0
	V-1	51	50.212	ug/L	0.923	1	130	680465	1
	Cr	52	50.260	ug/L	1.406	2	15247	605352	2
	Cr	53	51.510	ug/L	1.619	3	115	68345	2
	Mn	55	50.304	ug/L	0.454	0	250	815413	0
	Co	59	51.786	ug/L	0.231	0	40	651516	1
>	Ge	72		ug/L			457613	459939	1
	Ni	60	50.470	ug/L	1.372	2	22	140653	1
	Ni	62	49.846	ug/L	0.648	1	29	19555	0
	Cu	63	51.230	ug/L	2.106	4	58	320542	2
	Cu	65	51.245	ug/L	1.016	1	28	144908	0
	Zn	66	49.705	ug/L	1.726	3	143	82938	2
	Zn	67	51.199	ug/L	1.131	2	23	13926	2
	Zn	68	51.268	ug/L	0.740	1	137	61576	0
	As	75	49.582	ug/L	1.100	2	267	77269	1
	As-1	75	50.018	ug/L	0.989	1	8149	85799	1
	Se	82	49.834	ug/L	1.549	3	-5	8420	1
	Se	78	51.372	ug/L	1.242	2	8278	30327	0
	Mo	98	48.399	ug/L	0.835	1	17	216091	2
	Y	89		ug/L			298590	298621	0
	Kr	83		ug/L			554	557	5
>	In	115		ug/L			979916	938906	1
	Ag	107	47.685	ug/L	0.692	1	15	624431	1
	Cd	111	50.910	ug/L	0.097	0	63	232717	1
	Cd	114	50.700	ug/L	1.020	2	30	576141	1
	Sb	121	50.246	ug/L	0.821	1	102	728986	0
	Sb	123	49.941	ug/L	1.037	2	72	555258	1
	Ba	135	50.622	ug/L	1.064	2	11	206045	0
	Ba	137	50.218	ug/L	1.309	2	17	352955	1
>	Tb	159		ug/L			1160798	1111509	1
	Tl	205	51.733	ug/L	0.826	1	51	1657421	0
	Pb	208	51.292	ug/L	0.795	1	139	2168210	0
	Bi	209		ug/L			2367270	2215073	0
	Th	232	50.837	ug/L	0 534	1	21	2049675	0
	U	238	52.131	ug/L	1.387	2	3	2137564	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:05:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	673300	0
	Be	**9**	**0.002**	ug/L	0.001	33	5	8	13
	C	**13**		ug/L			58801	56331	3
	Cl	**37**		ug/L			3025336	3054027	1
>	**Sc**	**45**		ug/L			671354	643550	1
	V	**51**	**0.024**	ug/L	0.008	32	5156	5265	2
	V-1	**51**	**0.002**	ug/L	0.001	56	130	158	13
	Cr	**52**	**0.080**	ug/L	0.037	46	15247	15550	3
	Cr	**53**	**0.010**	ug/L	0.012	122	115	124	13
	Mn	**55**	**0.003**	ug/L	0.002	54	250	285	10
	Co	**59**	**0.001**	ug/L	0.000	56	40	46	10
>	**Ge**	**72**		ug/L			457613	454935	1
	Ni	**60**	**0.004**	ug/L	0.007	182	22	33	60
	Ni	**62**	**0.143**	ug/L	0.038	26	29	85	18
	Cu	**63**	**0.009**	ug/L	0.001	8	58	113	5
	Cu	**65**	**0.001**	ug/L	0.004	298	28	32	36
	Zn	**66**	**-0.010**	ug/L	0.008	80	143	125	9
	Zn	**67**	**-0.004**	ug/L	0.013	290	23	22	15
	Zn	**68**	**-0.006**	ug/L	0.005	84	137	129	2
	As	**75**	**-0.012**	ug/L	0.007	57	267	248	5
	As-1	**75**	**0.278**	ug/L	0.134	48	8149	8526	1
	Se	**82**	**-0.055**	ug/L	0.059	107	-5	-14	67
	Se	**78**	**1.018**	ug/L	0.490	48	8278	8659	1
	Mo	**98**	**0.016**	ug/L	0.002	14	17	86	11
	Y	**89**		ug/L			298590	293139	1
	Kr	**83**		ug/L			554	565	5
>	**In**	**115**		ug/L			979916	934887	0
	Ag	**107**	**0.002**	ug/L	0.001	30	15	45	20
	Cd	**111**	**0.005**	ug/L	0.003	61	63	81	16
	Cd	**114**	**0.002**	ug/L	0.001	61	30	51	26
	Sb	**121**	**0.067**	ug/L	0.006	8	102	1068	8
	Sb	**123**	**0.066**	ug/L	0.007	10	72	796	9
	Ba	**135**	**0.002**	ug/L	0.001	27	11	21	12
	Ba	**137**	**0.001**	ug/L	0.001	156	17	22	42
>	**Tb**	**159**		ug/L			1160798	1068831	0
	Tl	**205**	**0.006**	ug/L	0.002	28	51	218	22
	Pb	**208**	**0.001**	ug/L	0.001	81	139	162	16
	Bi	**209**		ug/L			2367270	2233301	1
	Th	**232**	**0.113**	ug/L	0.016	13	21	4384	13
	U	**238**	**0.002**	ug/L	0.000	21	3	80	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:09:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	664724	1
	Be	9	0.218	ug/L	0.013	6	5	453	5
	C	13		ug/L			58801	56361	3
	Cl	37		ug/L			3025336	2995308	2
>	Sc	45		ug/L			671354	647077	3
	V	51	0.232	ug/L	0.023	9	5156	8106	1
	V-1	51	0.208	ug/L	0.013	6	130	2938	3
	Cr	52	0.610	ug/L	0.062	10	15247	21826	0
	Cr	53	0.532	ug/L	0.023	4	115	813	0
	Mn	55	0.520	ug/L	0.023	4	250	8637	2
	Co	59	0.214	ug/L	0.013	6	40	2718	3
>	Ge	72		ug/L			457613	451418	1
	Ni	60	0.520	ug/L	0.014	2	22	1445	1
	Ni	62	0.662	ug/L	0.059	8	29	283	7
	Cu	63	0.541	ug/L	0.007	1	58	3380	2
	Cu	65	0.550	ug/L	0.030	5	28	1553	6
	Zn	66	4.418	ug/L	0.132	2	143	7364	2
	Zn	67	4.073	ug/L	0.109	2	23	1108	1
	Zn	68	4.349	ug/L	0.026	0	137	5250	1
	As	75	0.190	ug/L	0.018	9	267	553	5
	As-1	75	0.540	ug/L	0.025	4	8149	8861	1
	Se	82	0.584	ug/L	0.048	8	-5	91	9
	Se	78	1.794	ug/L	0.117	6	8278	8920	1
	Mo	98	0.193	ug/L	0.006	3	17	863	3
	Y	89		ug/L			298590	296537	0
	Kr	83		ug/L			554	517	1
>	In	115		ug/L			979916	943085	1
	Ag	107	0.202	ug/L	0.005	2	15	2676	1
	Cd	111	0.115	ug/L	0.009	7	63	588	6
	Cd	114	0.107	ug/L	0.005	4	30	1252	5
	Sb	121	0.213	ug/L	0.007	3	102	3206	2
	Sb	123	0.215	ug/L	0 003	1	72	2471	0
	Ba	135	0.511	ug/L	0.022	4	11	2099	3
	Ba	137	0.493	ug/L	0.006	1	17	3497	1
>	Tb	159		ug/L			1160798	1071843	1
	Tl	205	0.222	ug/L	0.004	1	51	6896	0
	Pb	208	0.116	ug/L	0.004	3	139	4848	1
	Bi	209		ug/L			2367270	2241773	0
	Th	232	0.260	ug/L	0.007	2	21	10131	1
	U	238	0.219	ug/L	0.005	2	3	8666	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:13:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	657521	1
	Be	9	0.000	ug/L	0.001	971	5	5	39
	C	13		ug/L			58801	113952	2
	Cl	37		ug/L			3025336	8335589	2
>	Sc	45		ug/L			671354	664054	2
	V	51	0.068	ug/L	0.032	47	5156	6048	8
	V-1	51	1.416	ug/L	0.043	3	130	19751	0
	Cr	52	0.596	ug/L	0.030	5	15247	22239	1
	Cr	53	5.006	ug/L	0.187	3	115	6895	1
	Mn	55	0.047	ug/L	0.004	7	250	1033	3
	Co	59	0.021	ug/L	0.001	3	40	307	1
>	Ge	72		ug/L			457613	442144	1
	Ni	60	0.343	ug/L	0.014	4	22	941	3
	Ni	62	2.875	ug/L	0.551	19	29	1109	17
	Cu	63	0.946	ug/L	0.047	4	58	5742	3
	Cu	65	0.305	ug/L	0.024	8	28	855	6
	Zn	66	0.896	ug/L	0.009	1	143	1572	0
	Zn	67	6.568	ug/L	0.015	0	23	1737	1
	Zn	68	0.398	ug/L	0.021	5	137	590	2
	As	75	0.049	ug/L	0.058	119	267	331	25
	As-1	75	0.468	ug/L	0.102	21	8149	8570	0
	Se	82	-0.219	ug/L	0.106	48	-5	-41	43
	Se	78	1.645	ug/L	0.274	16	8278	8675	0
	Mo	98	417.302	ug/L	10.636	2	17	1790660	1
	Y	89		ug/L			298590	294224	1
	Kr	83		ug/L			554	719	5
>	In	115		ug/L			979916	944291	1
	Ag	107	0.026	ug/L	0.002	7	15	350	6
	Cd	111	0.113	ug/L	0.014	12	63	580	11
	Cd	114	0.266	ug/L	0.002	0	30	3070	0
	Sb	121	0.070	ug/L	0.003	4	102	1126	4
	Sb	123	0.073	ug/L	0.003	4	72	883	5
	Ba	135	0.051	ug/L	0.003	6	11	219	6
	Ba	137	0.041	ug/L	0.002	5	17	309	5
>	Tb	159		ug/L			1160798	1158938	1
	Tl	205	0.036	ug/L	0.001	2	51	1249	2
	Pb	208	0.031	ug/L	0.001	3	139	1493	3
	Bi	209		ug/L			2367270	2140693	0
	Th	232	0.234	ug/L	0.129	55	21	9824	53
	U	238	0.002	ug/L	0.000	18	3	70	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:19:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	650871 ✓	1
	Be	9	0.001	ug/L	0.001	167	5	6	32
	C	13		ug/L			58801	113109	1
	Cl	37		ug/L			3025336	8133764	2
>	Sc	45		ug/L			671354	649064 ✓	1
	V	51	0.067	ug/L	0.164	243	5156	5874	36
	V-1	51	1.481	ug/L	0.048	3	130	20184	1
	Cr	52	20.105	ug/L	0.697	3	15247	250901	1
	Cr	53	24.778 >	ug/L	0.349	1	115	32928	0
	Mn	55	19.515	ug/L	0.173	0	250	316411	0
	Co	59	19.846	ug/L	0.342	1	40	249666	2
>	Ge	72		ug/L			457613	434992 ✓	1
	Ni	60	20.342	ug/L	0.279	1	22	53640	1
	Ni	62	23.807	ug/L	0.494	2	29	8848	1
	Cu	63	20.600	ug/L	0.126	0	58	121985	1
	Cu	65	20.475	ug/L	0.552	2	28	54772	1
	Zn	66	20.028	ug/L	0.288	1	143	31692	0
	Zn	67	24.416	ug/L	0.108	0	23	6293	0
	Zn	68	18.434	ug/L	0.234	1	137	21023	0
	As	75	19.377	ug/L	0.169	0	267	28716	0
	As-1	75	19.980	ug/L	0.202	1	8149	37068	0
	Se	82	-0.204	ug/L	0.108	52	-5	-37	46
	Se	78	2.215	ug/L	0.164	7	8278	8766	0
	Mo	98	420.975	ug/L	13.426	3	17	1777102	1
	Y	89		ug/L			298590	291174	0
	Kr	83		ug/L			554	682	6
>	In	115		ug/L			979916	947542 ✓	1
	Ag	107	20.273	ug/L	0.411	2	15	267896	1
	Cd	111	19.776	ug/L	0.253	1	63	91272	1
	Cd	114	19.879	ug/L	0.241	1	30	228016	0
	Sb	121	0.069	ug/L	0.004	5	102	1115	4
	Sb	123	0.071	ug/L	0.002	2	72	869	1
	Ba	135	0.050	ug/L	0.000	0	11	217	1
	Ba	137	0.045	ug/L	0.002	3	17	334	3
>	Tb	159		ug/L			1160798	1159475 ✓	1
	Tl	205	0.033	ug/L	0.003	8	51	1142	6
	Pb	208	0.033	ug/L	0.000	1	139	1588	0
	Bi	209		ug/L			2367270	2159771	0
	Th	232	0.072	ug/L	0.019	26	21	3041	26
	U	238	0.000	ug/L	0.000	12	3	23	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:26:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	609319	1
	Be	9	206.077	ug/L	3.482	1	5	389040	1
	C	13		ug/L			58801	55833	0
	Cl	37		ug/L			3025336	3189014	2
>	Sc	45		ug/L			671354	602641	1
	V	51	195.948	ug/L	7.680	3	5156	2470524	2
	V-1	51	199.129	ug/L	7.737	3	130	2504225	2
	Cr	52	195.961	ug/L	4.733	2	15247	2151167	1
	Cr	53	206.364	ug/L	5.092	2	115	253859	1
	Mn	55	195.404	ug/L	3.233	1	250	2939491	1
	Co	59	200.405	ug/L	6.381	3	40	2339954	2
>	Ge	72		ug/L			457613	425535	0
	Ni	60	198.985	ug/L	2.180	1	22	513113	0
	Ni	62	198.880	ug/L	1.683	0	29	72115	1
	Cu	63	200.571	ug/L	1.648	0	58	1161356	0
	Cu	65	199.425	ug/L	4.286	2	28	521708	1
	Zn	66	194.570	ug/L	5.667	2	143	300077	3
	Zn	67	199.674	ug/L	5.517	2	23	50182	2
	Zn	68	191.986	ug/L	2.160	1	137	213004	0
	As	75	197.213	ug/L	2.875	1	267	283637	0
	As-1	75	197.476	ug/L	2.860	1	8149	291090	0
	Se	82	194.359	ug/L	2.528	1	-5	30405	0
	Se	78	195.440	ug/L	2.980	1	8278	85172	1
	Mo	98	202.854	ug/L	4.196	2	17	837990	2
	Y	89		ug/L			298590	282070	2
	Kr	83		ug/L			554	661	0
>	In	115		ug/L			979916	910337	2
	Ag	107	185.645	ug/L	3.522	1	15	2356522	0
	Cd	111	197.211	ug/L	2.645	1	63	873743	0
	Cd	114	192.799	ug/L	3.502	1	30	2124127	1
	Sb	121	196.719	ug/L	3.933	1	102	2766689	0
	Sb	123	197.492	ug/L	4.290	2	72	2128579	0
	Ba	135	207.938	ug/L	4.721	2	11	820519	0
	Ba	137	207.000	ug/L	4.826	2	17	1410525	0
>	Tb	159		ug/L			1160798	1104780	0
	Tl	205	197.430	ug/L	1.709	0	51	6287827	1
	Pb	208	196.838	ug/L	1.394	0	139	8270727	0
	Bi	209		ug/L			2367270	2090096	1
	Th	232	201.470	ug/L	1.463	0	21	8074015	0
	U	238	201.287	ug/L	3.374	1	3	8204463	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:33:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	577075	2
	Be	9	306.409	ug/L	13.494	4	5	547527	2
	C	13		ug/L			58801	55076	2
	Cl	37		ug/L			3025336	3162904	4
>	Sc	45		ug/L			671354	612226	1
	V	51	283.797	ug/L	9 660	3	5156	3632748	1
	V-1	51	289.290	ug/L	8.982	3	130	3695831	1
	Cr	52	282.229	ug/L	7.460	2	15247	3141339	1
	Cr	53	300.191	ug/L	3.095	1	115	375145	0
	Mn	55	281.724	ug/L	4.653	1	250	4305097	0
	Co	59	293.242	ug/L	0.943	0	40	3478953	1
>	Ge	72		ug/L			457613	422819	1
	Ni	60	290.818	ug/L	8.256	2	22	745163	3
	Ni	62	299.097	ug/L	5.548	1	29	107725	0
	Cu	63	291.362	ug/L	2.585	0	58	1676304	1
	Cu	65	293.934	ug/L	6.524	2	28	763966	1
	Zn	66	282.337	ug/L	7.145	2	143	432483	1
	Zn	67	289.816	ug/L	6.451	2	23	72355	0
	Zn	68	280.385	ug/L	0.872	0	137	309043	1
	As	75	292.245	ug/L	0.429	0	267	417538	1
	As-1	75	294.389	ug/L	2.060	0	8149	427505	1
	Se	82	278.441	ug/L	5.430	1	-5	43279	1
	Se	78	286.376	ug/L	5.724	1	8278	120435	1
	Mo	98	288.631	ug/L	5.818	2	17	1184544	1
	Y	89		ug/L			298590	273325	1
	Kr	83		ug/L			554	740	5
>	In	115		ug/L			979916	863682	0
	Ag	107	257.877	ug/L	12.200	4	15	3106982	5
	Cd	111	292.348	ug/L	4.398	1	63	1229105	2
	Cd	114	287.278	ug/L	3.540	1	30	3003373	1
	Sb	121	294.235	ug/L	2.356	0	102	3927140	1
	Sb	123	293.233	ug/L	2.550	0	72	2999273	0
	Ba	135	317.752	ug/L	2.211	0	11	1189941	1
	Ba	137	309.519	ug/L	2.815	0	17	2001559	0
>	Tb	159		ug/L			1160798	1089373	0
	Tl	205	292.709	ug/L	4.715	1	51	9191409	1
	Pb	208	286.234	ug/L	3.533	1	139	11858836	0
	Bi	209		ug/L			2367270	1988062	0
	Th	232	295.250	ug/L	3.596	1	21	11667334	0
	U	238	297.492	ug/L	3.924	1	3	11957127	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:40:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	615194	3
	Be	9	0.003	ug/L	0.003	93	5	10	53
	C	13		ug/L			58801	54586	1
	Cl	37		ug/L			3025336	3096695	3
>	Sc	45		ug/L			671354	611140	0
	V	51	0.038	ug/L	0 010	26	5156	5184	2
	V-1	51	0.012	ug/L	0.001	8	130	267	4
	Cr	52	0.139	ug/L	0.031	22	15247	15413	1
	Cr	53	0.051	ug/L	0.007	13	115	169	4
	Mn	55	0.021	ug/L	0.001	4	250	546	2
	Co	59	0.002	ug/L	0.000	21	40	63	8
>	Ge	72		ug/L			457613	448126	0
	Ni	60	0.022	ug/L	0.002	8	22	82	6
	Ni	62	0.801	ug/L	0.094	11	29	334	10
	Cu	63	0.067	ug/L	0.007	11	58	468	9
	Cu	65	0.022	ug/L	0.003	14	28	87	9
	Zn	66	1.043	ug/L	0.030	2	143	1833	2
	Zn	67	1.049	ug/L	0.095	9	23	300	7
	Zn	68	1.045	ug/L	0.024	2	137	1354	2
	As	75	-0.008	ug/L	0.032	384	267	249	18
	As-1	75	0.414	ug/L	0.077	18	8149	8605	0
	Se	82	0.012	ug/L	0.040	335	-5	-3	197
	Se	78	1.501	ug/L	0.228	15	8278	8733	0
	Mo	98	0.053	ug/L	0.007	13	17	246	13
	Y	89		ug/L			298590	286909	2
	Kr	83		ug/L			554	524	4
>	In	115		ug/L			979916	914244	1
	Ag	107	0.007	ug/L	0.002	27	15	106	23
	Cd	111	0.011	ug/L	0.002	19	63	109	7
	Cd	114	0.005	ug/L	0.000	8	30	79	6
	Sb	121	0.289	ug/L	0.028	9	102	4176	8
	Sb	123	0.298	ug/L	0.027	8	72	3292	7
	Ba	135	0.012	ug/L	0.002	19	11	58	14
	Ba	137	0.011	ug/L	0.002	14	17	93	10
>	Tb	159		ug/L			1160798	1059904	0
	Tl	205	0.040	ug/L	0.014	35	51	1254	33
	Pb	208	0.009	ug/L	0.001	6	139	506	5
	Bi	209		ug/L			2367270	2213777	1
	Th	232	0.176	ug/L	0.025	14	21	6781	14
	U	238	0.005	ug/L	0.001	11	3	210	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:46:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619916	1
	Be	9	0.001	ug/L	0.003	301	5	6	82
	C	13		ug/L			58801	55312	1
	Cl	37		ug/L			3025336	3021845	2
>	Sc	45		ug/L			671354	605160	3
	V	51	0.032	ug/L	0.019	58	5156	5045	1
	V-1	51	0.009	ug/L	0.001	10	130	234	1
	Cr	52	0.117	ug/L	0.062	52	15247	15005	1
	Cr	53	0.043	ug/L	0.012	27	115	157	9
	Mn	55	0.030	ug/L	0.002	6	250	684	3
	Co	59	0.002	ug/L	0.002	94	40	63	41
>	Ge	72		ug/L			457613	442941	1
	Ni	60	0.031	ug/L	0.007	24	22	103	17
	Ni	62	0.557	ug/L	0.044	7	29	239	7
	Cu	63	0.049	ug/L	0.001	2	58	354	1
	Cu	65	0.017	ug/L	0.004	24	28	74	14
	Zn	66	1.371	ug/L	0.046	3	143	2337	3
	Zn	67	1.215	ug/L	0.068	5	23	340	6
	Zn	68	1.322	ug/L	0.028	2	137	1658	2
	As	75	-0.003	ug/L	0.014	478	267	255	8
	As-1	75	0.332	ug/L	0.124	37	8149	8382	1
	Se	82	-0.012	ug/L	0.037	300	-5	-7	83
	Se	78	1.186	ug/L	0.441	37	8278	8501	0
	Mo	98	0.017	ug/L	0.005	28	17	89	23
	Y	89		ug/L			298590	286549	0
	Kr	83		ug/L			554	531	1
>	In	115		ug/L			979916	917489	0
	Ag	107	0.003	ug/L	0.000	9	15	56	6
	Cd	111	0.006	ug/L	0.002	34	63	86	11
	Cd	114	0.002	ug/L	0.001	27	30	52	12
	Sb	121	0.084	ug/L	0.007	8	102	1281	7
	Sb	123	0.085	ug/L	0.012	14	72	985	12
	Ba	135	0.018	ug/L	0.002	11	11	81	9
	Ba	137	0.014	ug/L	0.002	17	17	115	13
>	Tb	159		ug/L			1160798	1062534	0
	Tl	205	0.022	ug/L	0.011	51	51	713	47
	Pb	208	0.010	ug/L	0.000	2	139	548	2
	Bi	209		ug/L			2367270	2213394	0
	Th	232	0.066	ug/L	0.003	4	21	2557	5
	U	238	0.002	ug/L	0 000	3	3	71	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:52:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			726304	641603	1
Be	9	0.001	ug/L	0.002	129	5	7	45
C	13		ug/L			58801	56930	4
Cl	37		ug/L			3025336	3060608	1
> Sc	45		ug/L			671354	611885	0
V	51	0.030	ug/L	0.002	6	5156	5085	0
V-1	51	0.006	ug/L	0.001	19	130	198	7
Cr	52	0.112	ug/L	0.009	7	15247	15135	0
Cr	53	0.034	ug/L	0.008	24	115	147	6
Mn	55	0.013	ug/L	0.001	9	250	424	4
Co	59	0.002	ug/L	0.000	14	40	61	5
> Ge	72		ug/L			457613	449443	0
Ni	60	0.024	ug/L	0.005	21	22	86	14
Ni	62	0.436	ug/L	0.036	8	29	196	7
Cu	63	0.037	ug/L	0.002	4	58	283	4
Cu	65	0.011	ug/L	0 004	33	28	57	16
Zn	66	0.740	ug/L	0.051	6	143	1344	5
Zn	67	0.727	ug/L	0 042	5	23	216	5
Zn	68	0.758	ug/L	0.024	3	137	1022	2
As	75	0.012	ug/L	0.020	169	267	280	11
As-1	75	0.213	ug/L	0.052	24	8149	8326	0
Se	82	0.084	ug/L	0.042	50	-5	8	80
Se	78	0.745	ug/L	0.238	31	8278	8442	0
Mo	98	0.011	ug/L	0 003	31	17	63	23
Y	89		ug/L			298590	284306	2
Kr	83		ug/L			554	509	6
> In	115		ug/L			979916	922948	1
Ag	107	0.003	ug/L	0 002	60	15	55	44
Cd	111	0.003	ug/L	0.003	121	63	71	19
Cd	114	0.004	ug/L	0.002	68	30	68	39
Sb	121	0.042	ug/L	0.005	11	102	696	9
Sb	123	0.043	ug/L	0.005	11	72	535	9
Ba	135	0.011	ug/L	0.004	41	11	53	32
Ba	137	0.009	ug/L	0.000	2	17	81	2
Tb	159		ug/L			1160798	1075302	0
Tl	205	0.014	ug/L	0.004	28	51	470	25
Pb	208	0.008	ug/L	0.001	16	139	451	11
Bi	209		ug/L			2367270	2229145	1
Th	232	0.047	ug/L	0.007	15	21	1860	14
U	238	0.001	ug/L	0.001	62	3	59	58

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:56:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	629463 ✓	1
	Be	9	52.179	ug/L	2.220	4	5	101728	2
	C	13		ug/L			58801	52038	1
	Cl	37		ug/L			3025336	3115060	1
>	Sc	45		ug/L			671354	629930 ✓	1
	V	51	48.870	ug/L	0.634	1	5156	647808	0
	V-1	51	48.942	ug/L	0.592	1	130	643582	0
	Cr	52	49.933	ug/L	0.545	1	15247	583698	0
	Cr	53	50.172	ug/L	0.410	0	115	64606	1
	Mn	55	48.989	ug/L	1.592	3	250	770446	2
	Co	59	50.515	ug/L	1.603	3	40	616810	4
>	Ge	72		ug/L			457613	455134 ✓	0
	Ni	60	48.271	ug/L	0.443	0	22	133154	1
	Ni	62	48.036	ug/L	1.413	2	29	18649	2
	Cu	63	49.005	ug/L	0.631	1	58	303515	0
	Cu	65	49.250	ug/L	0.691	1	28	137826	0
	Zn	66	49.059	ug/L	0.414	0	143	81025	0
	Zn	67	51.214	ug/L	0.658	1	23	13786	1
	Zn	68	49.331	ug/L	1.310	2	137	58639	2
	As	75	48.124	ug/L	0.684	1	267	74227	0
	As-1	75	48.456	ug/L	0.685	1	8149	82510	0
	Se	82	48.316	ug/L	0.418	0	-5	8080	0
	Se	78	49.379	ug/L	1.031	2	8278	29169	1
	Mo	98	43.992	ug/L	0.468	1	17	194359	0
	Y	89		ug/L			298590	285118	1
	Kr	83		ug/L			554	497	1
>	In	115		ug/L			979916	914653 ✓	1
	Ag	107	45.825	ug/L	0.786	1	15	584636	2
	Cd	111	51.074	ug/L	1.115	2	63	227403	1
	Cd	114	50.255	ug/L	0.373	0	30	556416	1
	Sb	121	50.817	ug/L	1.023	2	102	718236	0
	Sb	123	50.401	ug/L	1.077	2	72	545938	1
	Ba	135	50.858	ug/L	0.836	1	11	201681	0
	Ba	137	50.512	ug/L	1.379	2	17	345881	1
>	Tb	159		ug/L			1160798	1089830 ✓	0
	Tl	205	51.441	ug/L	0.276	0	51	1616139	0
	Pb	208	50.891	ug/L	0.418	0	139	2109517	0
	Bi	209		ug/L			2367270	2186484	0
	Th	232	51.048	ug/L	0.973	1	21	2018213	2
	U	238	52.240	ug/L	0.016	0	3	2100659	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:03:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			726304	619987 ✓	0
	Be	**9**	**0.000**	ug/L	0.001	417	5	5	39
	C	**13**		ug/L			58801	52087	4
	Cl	**37**		ug/L			3025336	3065436	1
>	**Sc**	**45**		ug/L			671354	613071 ✓	0
	V	**51**	**0.025**	ug/L	0.016	65	5156	5026	3
	V-1	**51**	**0.003**	ug/L	0.000	9	130	153	2
	Cr	**52**	**0.084**	ug/L	0.048	56	15247	14853	2
	Cr	**53**	**0.011**	ug/L	0 006	55	115	120	7
	Mn	**55**	**0.004**	ug/L	0.001	15	250	296	4
	Co	**59**	**0.001**	ug/L	0.001	101	40	45	19
>	**Ge**	**72**		ug/L			457613	435471 ✓	0
	Ni	**60**	**0.000**	ug/L	0.002	3944	22	21	22
	Ni	**62**	**0.389**	ug/L	0.019	4	29	172	3
	Cu	**63**	**0.024**	ug/L	0.001	3	58	197	3
	Cu	**65**	**-0.000**	ug/L	0.002	1731	28	27	16
	Zn	**66**	**-0.005**	ug/L	0.002	38	143	128	2
	Zn	**67**	**0.017**	ug/L	0.024	136	23	27	23
	Zn	**68**	**0.006**	ug/L	0.015	265	137	136	12
	As	**75**	**-0.001**	ug/L	0.018	1417	267	253	10
	As-1	**75**	**0.366**	ug/L	0.108	29	8149	8292	0
	Se	**82**	**0.000**	ug/L	0.041	26221	-5	-5	128
	Se	**78**	**1.335**	ug/L	0.417	31	8278	8418	1
	Mo	**98**	**0.017**	ug/L	0.005	33	17	86	26
	Y	**89**		ug/L			298590	280176	1
	Kr	**83**		ug/L			554	531	8
>	**In**	**115**		ug/L			979916	903574 ✓	1
	Ag	**107**	**0.002**	ug/L	0.000	7	15	44	4
	Cd	**111**	**0.006**	ug/L	0.003	48	63	85	14
	Cd	**114**	**0.002**	ug/L	0.001	29	30	50	13
	Sb	**121**	**0.078**	ug/L	0.008	10	102	1185	10
	Sb	**123**	**0.079**	ug/L	0.011	13	72	913	13
	Ba	**135**	**0.000**	ug/L	0.001	255	11	11	19
	Ba	**137**	**0.000**	ug/L	0.000	64	17	18	11
>	**Tb**	**159**		ug/L			1160798	1049952 ✓	0
	Tl	**205**	**0.009**	ug/L	0.003	39	51	310	33
	Pb	**208**	**0.001**	ug/L	0.000	14	139	174	3
	Bi	**209**		ug/L			2367270	2199190	0
	Th	**232**	**0.105**	ug/L	0.016	15	21	4015	15
	U	**238**	**0.002**	ug/L	0.000	12	3	72	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	634669	1
	Be	9	0.001	ug/L	0.001	52	5	7	19
	C	13		ug/L			58801	57096	0
	Cl	37		ug/L			3025336	3080979	1
>	Sc	45		ug/L			671354	621749	0
	V	51	0.041	ug/L	0.015	36	5156	5306	3
	V-1	51	0.002	ug/L	0.001	47	130	143	7
	Cr	52	0.126	ug/L	0.042	32	15247	15544	3
	Cr	53	-0.001	ug/L	0.007	509	115	105	8
	Mn	55	0.017	ug/L	0.001	4	250	490	2
	Co	59	0.001	ug/L	0.000	22	40	49	5
>	Ge	72		ug/L			457613	448808	2
	Ni	60	0.003	ug/L	0.005	202	22	29	47
	Ni	62	0.350	ug/L	0.037	10	29	162	6
	Cu	63	0.032	ug/L	0.004	11	58	254	7
	Cu	65	0.016	ug/L	0.001	7	28	71	4
	Zn	66	0.149	ug/L	0.008	5	143	382	5
	Zn	67	0.161	ug/L	0.039	24	23	66	18
	Zn	68	0.168	ug/L	0.017	10	137	330	4
	As	75	-0.026	ug/L	0.024	92	267	223	13
	As-1	75	0.282	ug/L	0.081	28	8149	8416	1
	Se	82	-0.048	ug/L	0.035	71	-5	-13	45
	Se	78	1.038	ug/L	0.267	25	8278	8551	1
	Mo	98	0.006	ug/L	0.002	36	17	40	19
	Y	89		ug/L			298590	289535	1
	Kr	83		ug/L			554	531	4
>	In	115		ug/L			979916	930087	1
	Ag	107	0.002	ug/L	0.000	17	15	34	9
	Cd	111	0.005	ug/L	0.002	50	63	80	11
	Cd	114	0.002	ug/L	0.000	21	30	46	7
	Sb	121	0.029	ug/L	0.004	13	102	519	10
	Sb	123	0.030	ug/L	0 004	14	72	399	12
	Ba	135	0.004	ug/L	0.001	30	11	28	17
	Ba	137	0.004	ug/L	0.000	12	17	41	7
>	Tb	159		ug/L			1160798	1076174	0
	Tl	205	0.007	ug/L	0 003	43	51	256	35
	Pb	208	0.002	ug/L	0.000	13	139	229	5
	Bi	209		ug/L			2367270	2231253	0
	Th	232	0.123	ug/L	0 026	20	21	4831	20
	U	238	0.001	ug/L	0.000	7	3	34	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641814	1
	Be	9	26.263	ug/L	0.843	3	5	52222	2
	C	13		ug/L			58801	53288	1
	Cl	37		ug/L			3025336	3055405	2
>	Sc	45		ug/L			671354	630484	0
	V	51	25.819	ug/L	0.241	0	5156	344883	1
	V-1	51	25.904	ug/L	0.296	1	130	341042	2
	Cr	52	26.456	ug/L	0.248	0	15247	316265	0
	Cr	53	26.735	ug/L	0.265	0	115	34509	1
	Mn	55	26.583	ug/L	0.132	0	250	418605	0
	Co	59	26.248	ug/L	0.372	1	40	320697	1
>	Ge	72		ug/L			457613	461330	0
	Ni	60	25.874	ug/L	0.297	1	22	72351	0
	Ni	62	26.080	ug/L	0.153	0	29	10277	0
	Cu	63	26.070	ug/L	0.451	1	58	163710	1
	Cu	65	26.015	ug/L	0.199	0	28	73815	1
	Zn	66	81.720	ug/L	0.448	0	143	136715	0
	Zn	67	77.963	ug/L	2.808	3	23	21261	4
	Zn	68	78.751	ug/L	1.236	1	137	94803	1
	As	75	24.716	ug/L	0.366	1	267	38775	1
	As-1	75	24.876	ug/L	0.658	2	8149	46933	1
	Se	82	78.606	ug/L	0.836	1	-5	13329	1
	Se	78	79.212	ug/L	1.205	1	8278	42387	1
	Mo	98	22.353	ug/L	0.066	0	17	100117	0
	Y	89		ug/L			298590	294680	2
	Kr	83		ug/L			554	511	5
>	In	115		ug/L			979916	932376	2
	Ag	107	24.217	ug/L	0.718	2	15	314797	0
	Cd	111	25.109	ug/L	0.607	2	63	113967	0
	Cd	114	25.528	ug/L	0.923	3	30	287983	1
	Sb	121	25.405	ug/L	0.521	2	102	366028	0
	Sb	123	25.135	ug/L	0.848	3	72	277466	1
	Ba	135	26.346	ug/L	0.712	2	11	106473	0
	Ba	137	25.758	ug/L	0.561	2	17	179781	0
>	Tb	159		ug/L			1160798	1088396	1
	Tl	205	27.441	ug/L	0.369	1	51	860919	0
	Pb	208	27.177	ug/L	0.337	1	139	1125021	0
	Bi	209		ug/L			2367270	2259344	0
	Th	232	27.067	ug/L	0.548	2	21	1068581	1
	U	238	27.065	ug/L	0.354	1	3	1086886	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Cr, Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	673538 ✓	1
	Be	**9**	**0.218**	ug/L	0.008	3	5	460	4
	C	**13**		ug/L			58801	58284	2
	Cl	**37**		ug/L			3025336	3079334	2
>	**Sc**	**45**		ug/L			671354	650187 ✓	1
	V	**51**	**6.992**	ug/L	0.042	0	5156	99953	1
	V-1	**51**	**7.024**	ug/L	0.052	0	130	95456	2
	Cr	**52**	**5.532**	ug/L	0.136	2	15247	79867	1
	Cr	**53**	**5.633**	ug/L	0.069	1	115	7586	2
	Mn	**55**	**186.614**	ug/L	1.028	0	250	3028956	1
	Co	**59**	**2.068**	ug/L	0.033	1	40	26088	1
>	**Ge**	**72**		ug/L			457613	465896 ✓	0
	Ni	**60**	**5.404**	ug/L	0.144	2	22	15279	2
	Ni	**62**	**5.587**	ug/L	0.067	1	29	2247	1
	Cu	**63**	**4.374**	ug/L	0.064	1	58	27785	1
	Cu	**65**	**4.409**	ug/L	0.037	0	28	12657	0
	Zn	**66**	**27.038**	ug/L	0.376	1	143	45778	1
	Zn	**67**	**30.940**	ug/L	0.700	2	23	8534	2
	Zn	**68**	**29.433**	ug/L	0.197	0	137	35871	0
	As	**75**	**2.424**	ug/L	0.048	1	267	4085	1
	As-1	**75**	**2.421**	ug/L	0.032	1	8149	12102	0
	Se	**82**	**0.047**	ug/L	0 108	228	-5	2	701
	Se	**78**	**0.026**	ug/L	0.062	235	8278	8440	0
	Mo	**98**	**0.083**	ug/L	0.002	2	17	390	2
	Y	**89**		ug/L			298590	322444	1
	Kr	**83**		ug/L			554	561	5
>	**In**	**115**		ug/L			979916	936450 ✓	1
	Ag	**107**	**0.039**	ug/L	0.004	10	15	529	8
	Cd	**111**	**0.208**	ug/L	0.008	3	63	1006	1
	Cd	**114**	**0.181**	ug/L	0.003	1	30	2077	1
	Sb	**121**	**0.042**	ug/L	0.004	10	102	708	7
	Sb	**123**	**0.039**	ug/L	0.005	12	72	501	8
	Ba	**135**	**85.653**	ug/L	1.840	2	11	347701	0
	Ba	**137**	**84.132**	ug/L	0.712	0	17	589864	0
>	**Tb**	**159**		ug/L			1160798	1111161 ✓	1
	Tl	**205**	**0.039**	ug/L	0.002	3	51	1313	4
	Pb	**208**	**10.359**	ug/L	0.181	1	139	437841	0
	Bi	**209**		ug/L			2367270	2245097	0
	Th	**232**	**1.168**	ug/L	0.076	6	21	47089	5
	U	**238**	**0.253**	ug/L	0.003	1	3	10395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT
Mn, Ba

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672130	2
	Be	9	1.016	ug/L	0.058	5	5	2118	3
	C	13		ug/L			58801	72062	3
	Cl	37		ug/L			3025336	3089820	2
>	Sc	45		ug/L			671354	685586	1
	V	51	33.349	ug/L	0.675	2	5156	482761	1
	V-1	51	33.559	ug/L	0.632	1	130	480291	0
	Cr	52	26.294	ug/L	0.627	2	15247	341857	1
	Cr	53	26.965	ug/L	0.642	2	115	37840	1
	Mn	55	875.615	ug/L	22.956	2	250	14982253	1
	Co	59	9.816	ug/L	0.325	3	40	130408	2
>	Ge	72		ug/L			457613	454915	0
	Ni	60	26.090	ug/L	0.392	1	22	71942	1
	Ni	62	28.941	ug/L	0.839	2	29	11242	2
	Cu	63	21.319	ug/L	0.445	2	58	132024	2
	Cu	65	22.099	ug/L	0.280	1	28	61838	1
	Zn	66	130.811	ug/L	2.985	2	143	215724	2
	Zn	67	150.801	ug/L	0.804	0	23	40527	1
	Zn	68	144.061	ug/L	1.028	0	137	170908	0
	As	75	12.009	ug/L	0.187	1	267	18714	1
	As-1	75	12.105	ug/L	0.223	1	8149	26680	1
	Se	82	-0.229	ug/L	0.092	40	-5	-43	35
	Se	78	0.706	ug/L	0.235	33	8278	8529	1
	Mo	98	0.359	ug/L	0.002	0	17	1600	0
	Y	89		ug/L			298590	440007	2
	Kr	83		ug/L			554	887	4
>	In	115		ug/L			979916	933421	1
	Ag	107	0.194	ug/L	0.006	2	15	2543	1
	Cd	111	1.044	ug/L	0.035	3	63	4802	2
	Cd	114	0.874	ug/L	0.012	1	30	9902	1
	Sb	121	0.078	ug/L	0.002	2	102	1220	3
	Sb	123	0.074	ug/L	0.002	3	72	891	3
	Ba	135	430.813	ug/L	4.832	1	11	1743387	0
	Ba	137	416.844	ug/L	4.701	1	17	2913016	0
>	Tb	159		ug/L			1160798	1136635	1
	Tl	205	0.171	ug/L	0.002	1	51	5654	1
	Pb	208	50.482	ug/L	0.666	1	139	2182268	0
	Bi	209		ug/L			2367270	2191684	0
	Th	232	4.809	ug/L	0.021	0	21	198308	0
	U	238	1.232	ug/L	0.013	1	3	51666	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:24:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	681780	2
	Be	**9**	**0.984**	ug/L	0.044	4	5	2083	3
	C	**13**		ug/L			58801	71989	1
	Cl	**37**		ug/L			3025336	3106861	2
>	**Sc**	**45**		ug/L			671354	708845	0
	V	**51**	**32.204**	ug/L	0.435	1	5156	482266	1
	V-1	**51**	**32.441**	ug/L	0.438	1	130	480133	1
	Cr	**52**	**29.573**	ug/L	0.512	1	15247	395580	1
	Cr	**53**	**30.344**	ug/L	0.266	0	115	44018	1
	Mn	**55**	**907.916**	ug/L	8.268	0	250	16065415	0
	Co	**59**	**9.492**	ug/L	0.199	2	40	130423	2
>	**Ge**	**72**		ug/L			457613	455525	1
	Ni	**60**	**32.368**	ug/L	0.885	2	22	89353	1
	Ni	**62**	**34.005**	ug/L	0.285	0	29	13222	0
	Cu	**63**	**21.709**	ug/L	0.442	2	58	134587	0
	Cu	**65**	**22.242**	ug/L	0.374	1	28	62310	0
	Zn	**66**	**130.736**	ug/L	0.723	0	143	215868	0
	Zn	**67**	**150.822**	ug/L	3.545	2	23	40578	1
	Zn	**68**	**141.740**	ug/L	4.005	2	137	168349	1
	As	**75**	**11.358**	ug/L	0.129	1	267	17738	0
	As-1	**75**	**11.434**	ug/L	0.179	1	8149	25682	0
	Se	**82**	**-0.258**	ug/L	0.108	41	-5	-48	38
	Se	**78**	**0.604**	ug/L	0.301	49	8278	8496	1
	Mo	**98**	**0.329**	ug/L	0.032	9	17	1471	8
	Y	**89**		ug/L			298590	437201	0
	Kr	**83**		ug/L			554	888	6
>	**In**	**115**		ug/L			979916	933694	1
	Ag	**107**	**0.190**	ug/L	0.006	3	15	2489	2
	Cd	**111**	**1.085**	ug/L	0.034	3	63	4991	3
	Cd	**114**	**0.889**	ug/L	0.009	0	30	10080	0
	Sb	**121**	**0.072**	ug/L	0.003	3	102	1139	3
	Sb	**123**	**0.071**	ug/L	0.003	4	72	855	3
	Ba	**135**	**420.311**	ug/L	6.647	1	11	1701386	0
	Ba	**137**	**406.648**	ug/L	8.208	2	17	2842494	0
>	**Tb**	**159**		ug/L			1160798	1130467	1
	Tl	**205**	**0.167**	ug/L	0.005	2	51	5482	3
	Pb	**208**	**48.463**	ug/L	0.536	1	139	2083637	0
	Bi	**209**		ug/L			2367270	2180455	0
	Th	**232**	**4.631**	ug/L	0.088	1	21	189897	1
	U	**238**	**1.224**	ug/L	0.022	1	3	51053	0

ICP-MS Quantitative Analysis - Summary Report

~~CK Mn Bat~~
11-16-12 MJJ

Sample ID: VR31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	670483	1
	Be	9	26.029	ug/L	0.308	1	5	54077	1
	C	13		ug/L			58801	71566	2
	Cl	37		ug/L			3025336	3092990	1
>	Sc	45		ug/L			671354	700272	2
	V	51	58.339	ug/L	0.744	1	5156	858558	1
	V-1	51	58.782	ug/L	0.820	1	130	859142	1
	Cr	52	47.711	ug/L	1.369	2	15247	620458	0
	Cr	53	49.135	ug/L	1.696	3	115	70298	0
	Mn	55	888.814	ug/L	41.923	4	250	15524293	2
	Co	59	32.325	ug/L	0.741	2	40	438556	1
>	Ge	72		ug/L			457613	447621	3
	Ni	60	50.592	ug/L	2.634	5	22	137074	1
	Ni	62	52.436	ug/L	2.669	5	29	19996	2
	Cu	63	47.659	ug/L	2.501	5	58	289946	1
	Cu	65	48.932	ug/L	3.126	6	28	134470	2
	Zn	66	216.103	ug/L	8.958	4	143	350212	1
	Zn	67	230.839	ug/L	6.949	3	23	60987	1
	Zn	68	222.531	ug/L	11.257	5	137	259364	1
	As	75	35.810	ug/L	1.919	5	267	54321	1
	As-1	75	36.172	ug/L	2.157	5	8149	62518	1
	Se	82	74.015	ug/L	3.614	4	-5	12162	1
	Se	78	76.044	ug/L	4.571	6	8278	39759	0
	Mo	98	20.222	ug/L	0.770	3	17	87798	0
	Y	89		ug/L			298590	440169	0
	Kr	83		ug/L			554	886	0
>	In	115		ug/L			979916	929357	2
	Ag	107	21.758	ug/L	0.258	1	15	282010	1
	Cd	111	25.458	ug/L	0.295	1	63	115201	1
	Cd	114	25.195	ug/L	0.560	2	30	283383	1
	Sb	121	1.163	ug/L	0.028	2	102	16789	2
	Sb	123	1.172	ug/L	0.022	1	72	12968	2
	Ba	135	439.976	ug/L	13.241	3	11	1772126	0
	Ba	137	425.149	ug/L	11.956	2	17	2957229	0
>	Tb	159		ug/L			1160798	1120422	1
	Tl	205	24.866	ug/L	0.313	1	51	803083	0
	Pb	208	78.670	ug/L	1.287	1	139	3351967	0
	Bi	209		ug/L			2367270	2134960	1
	Th	232	29.613	ug/L	0.477	1	21	1203423	0
	U	238	27.278	ug/L	0.529	1	3	1127476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 APOST SWN

Sb

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, November 15, 2012 14:32:31

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	674945	1
	Be	9	23.537	ug/L	0.839	3	5	49224	3
	C	13		ug/L			58801	74723	2
	Cl	37		ug/L			3025336	3106433	1
>	Sc	45		ug/L			671354	707054	2
	V	51	52.713	ug/L	0.094	0	5156	783934	2
	V-1	51	53.034	ug/L	0.311	0	130	782761	1
	Cr	52	45.462	ug/L	1.251	2	15247	597736	0
	Cr	53	46.495	ug/L	2.034	4	115	67169	2
	Mn	55	874.289	ug/L	23.988	2	250	15425904	1
	Co	59	30.677	ug/L	1.207	3	40	420119	2
>	Ge	72		ug/L			457613	450971	1
	Ni	60	49.136	ug/L	0.364	0	22	134307	2
	Ni	62	50.430	ug/L	0.549	1	29	19399	1
	Cu	63	43.996	ug/L	1.140	2	58	270004	2
	Cu	65	44.543	ug/L	0.887	1	28	123535	2
	Zn	66	200.025	ug/L	8.135	4	143	326783	2
	Zn	67	220.831	ug/L	1.481	0	23	58825	2
	Zn	68	213.785	ug/L	4.968	2	137	251309	1
	As	75	34.560	ug/L	0.509	1	267	52891	0
	As-1	75	34.457	ug/L	0.588	1	8149	60453	0
	Se	82	69.700	ug/L	1.283	1	-5	11552	1
	Se	78	69.970	ug/L	1 647	2	8278	37551	1
	Mo	98	20.897	ug/L	0.741	3	17	91470	2
	Y	89		ug/L			298590	448291	0
	Kr	83		ug/L			554	855	1
>	In	115		ug/L			979916	910154	0
	Ag	107	20.863	ug/L	0.635	3	15	264818	2
	Cd	111	23.674	ug/L	1.007	4	63	104914	3
	Cd	114	23.622	ug/L	0.783	3	30	260227	2
	Sb	121	22.439	ug/L	0.751	3	102	315653	3
	Sb	123	22.038	ug/L	0.456	2	72	237584	1
	Ba	135	468.132	ug/L	5.727	1	11	1847256	0
	Ba	137	448.936	ug/L	2.569	0	17	3059485	1
>	Tb	159		ug/L			1160798	1130035	0
	Tl	205	22.921	ug/L	0.648	2	51	746656	2
	Pb	208	72.890	ug/L	0.790	1	139	3132803	0
	Bi	209		ug/L			2367270	2149611	0
	Th	232	27.504	ug/L	0.622	2	21	1127427	1
	U	238	24.154	ug/L	0.755	3	3	1007011	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Fe~~ Mn, Ba
11.16.12 MJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	698329	2
	Be	**9**	**0.623**	ug/L	0.034	5	5	1353	4
	C	**13**		ug/L			58801	78455	1
	Cl	**37**		ug/L			3025336	3160350	1
>	**Sc**	**45**		ug/L			671354	716170	1
	V	**51**	**34.020**	ug/L	0.919	2	5156	514298	1
	V-1	**51**	**34.234**	ug/L	0.763	2	130	511776	1
	Cr	**52**	**31.894**	ug/L	0.597	1	15247	429684	0
	Cr	**53**	**32.587**	ug/L	0.233	0	115	47748	1
	Mn	**55**	**1063.232**	ug/L	28.748	2	250	19002631	1
	Co	**59**	**8.605**	ug/L	0.162	1	40	119440	0
>	**Ge**	**72**		ug/L			457613	456126	1
	Ni	**60**	**20.904**	ug/L	0.185	0	22	57806	1
	Ni	**62**	**22.903**	ug/L	0.461	2	29	8927	1
	Cu	**63**	**17.626**	ug/L	0.087	0	58	109446	0
	Cu	**65**	**18.048**	ug/L	0.413	2	28	50633	1
	Zn	**66**	**256.240**	ug/L	7.636	2	143	423455	2
	Zn	**67**	**257.678**	ug/L	4.340	1	23	69408	0
	Zn	**68**	**258.967**	ug/L	4.660	1	137	307906	1
	As	**75**	**12.264**	ug/L	0 089	0	267	19156	0
	As-1	**75**	**12.348**	ug/L	0.179	1	8149	27123	0
	Se	**82**	**-0.148**	ug/L	0.019	12	-5	-30	9
	Se	**78**	**0.494**	ug/L	0.341	68	8278	8460	0
	Mo	**98**	**0.503**	ug/L	0.005	0	17	2246	1
	Y	**89**		ug/L			298590	376488	1
	Kr	**83**		ug/L			554	755	0
>	**In**	**115**		ug/L			979916	944639	0
	Ag	**107**	**0.140**	ug/L	0.006	4	15	1857	3
	Cd	**111**	**2.156**	ug/L	0.013	0	63	9974	1
	Cd	**114**	**2.032**	ug/L	0.024	1	30	23264	1
	Sb	**121**	**0.143**	ug/L	0.007	4	102	2184	5
	Sb	**123**	**0.134**	ug/L	0.008	5	72	1563	5
	Ba	**135**	**347.645**	ug/L	4.971	1	11	1423873	1
	Ba	**137**	**341.216**	ug/L	0.681	0	17	2413434	0
>	**Tb**	**159**		ug/L			1160798	1130115	0
	Tl	**205**	**0.171**	ug/L	0.002	0	51	5624	0
	Pb	**208**	**87.202**	ug/L	0.093	0	139	3748211	0
	Bi	**209**		ug/L			2367270	2210582	0
	Th	**232**	**6.039**	ug/L	0.062	1	21	247579	1
	U	**238**	**0.757**	ug/L	0.007	0	3	31556	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:41:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AF MH~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	679526	1
	Be	**9**	**0.422**	ug/L	0.028	6	5	893	5
	C	**13**		ug/L			58801	77609	2
	Cl	**37**		ug/L			3025336	3126148	0
>	**Sc**	**45**		ug/L			671354	689327	0
	V	**51**	**28.455**	ug/L	0.535	1	5156	414965	1
	V-1	**51**	**28.609**	ug/L	0.550	1	130	411726	1
	Cr	**52**	**24.742**	ug/L	0.264	1	15247	324384	0
	Cr	**53**	**25.238**	ug/L	0.346	1	115	35619	0
	Mn	**55**	**633.499**	ug/L	8.576	1	250	10900767	1
	Co	**59**	**6.300**	ug/L	0.127	2	40	84185	1
>	**Ge**	**72**		ug/L			457613	465963	1
	Ni	**60**	**14.726**	ug/L	0.521	3	22	41590	2
	Ni	**62**	**15.883**	ug/L	0.581	3	29	6333	3
	Cu	**63**	**12.043**	ug/L	0.364	3	58	76398	2
	Cu	**65**	**12.506**	ug/L	0.183	1	28	35852	0
	Zn	**66**	**138.331**	ug/L	1.351	0	143	233626	0
	Zn	**67**	**142.198**	ug/L	1.014	0	23	39141	0
	Zn	**68**	**140.902**	ug/L	2.519	1	137	171195	0
	As	**75**	**10.361**	ug/L	0.129	1	267	16574	0
	As-1	**75**	**10.391**	ug/L	0.173	1	8149	24632	0
	Se	**82**	**< 0.035**	ug/L	0.002	6	-5	0	68
	Se	**78**	**0.237**	ug/L	0.168	70	8278	8531	0
	Mo	**98**	**0.435**	ug/L	0.016	3	17	1983	2
	Y	**89**		ug/L			298590	352227	1
	Kr	**83**		ug/L			554	632	2
>	**In**	**115**		ug/L			979916	955334	1
	Ag	**107**	**< 0.076**	ug/L	0.003	3	15	1020	3
	Cd	**111**	**1.710**	ug/L	0.010	0	63	8014	0
	Cd	**114**	**1.671**	ug/L	0.015	0	30	19349	0
	Sb	**121**	**< 0.081**	ug/L	0.002	2	102	1289	3
	Sb	**123**	**0.078**	ug/L	0.005	6	72	953	4
	Ba	**135**	**213.483**	ug/L	2.849	1	11	884189	0
	Ba	**137**	**214.617**	ug/L	4.197	1	17	1534917	0
>	**Tb**	**159**		ug/L			1160798	1115462	1
	Tl	**205**	**< 0.130**	ug/L	0.001	0	51	4231	1
	Pb	**208**	**47.375**	ug/L	0.749	1	139	2009688	0
	Bi	**209**		ug/L			2367270	2207211	0
	Th	**232**	**5.264**	ug/L	0.097	1	21	212969	0
	U	**238**	**0.558**	ug/L	0.007	1	3	22949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn Ba
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	675572	1
	Be	**9**	**0.550**	ug/L	0.013	2	5	1156	1
	C	**13**		ug/L			58801	77971	2
	Cl	**37**		ug/L			3025336	3147081	1
>	**Sc**	**45**		ug/L			671354	703172	1
	V	**51**	**32.062**	ug/L	0.406	1	5156	476269	1
	V-1	**51**	**32.326**	ug/L	0.546	1	130	474503	1
	Cr	**52**	**27.375**	ug/L	0.142	0	15247	364415	1
	Cr	**53**	**28.226**	ug/L	0.734	2	115	40614	0
	Mn	**55**	**594.130**	ug/L	7.263	1	250	10428099	1
	Co	**59**	**8.850**	ug/L	0.146	1	40	120617	1
>	**Ge**	**72**		ug/L			457613	455730	0
	Ni	**60**	**19.151**	ug/L	0.263	1	22	52909	0
	Ni	**62**	**20.529**	ug/L	0.421	2	29	7998	1
	Cu	**63**	**16.035**	ug/L	0.314	1	58	99490	1
	Cu	**65**	**16.391**	ug/L	0.437	2	28	45954	2
	Zn	**66**	**144.591**	ug/L	2.035	1	143	238843	1
	Zn	**67**	**159.247**	ug/L	2.659	1	23	42871	1
	Zn	**68**	**152.140**	ug/L	1.222	0	137	180806	0
	As	**75**	**9.950**	ug/L	0.191	1	267	15579	1
	As-1	**75**	**10.097**	ug/L	0.203	2	8149	23640	0
	Se	**82**	**-0.183**	ug/L	0.030	16	-5	-35	13
	Se	**78**	**0.703**	ug/L	0.159	22	8278	8543	0
	Mo	**98**	**0.419**	ug/L	0.009	2	17	1869	1
	Y	**89**		ug/L			298590	365735	0
	Kr	**83**		ug/L			554	759	3
>	**In**	**115**		ug/L			979916	933523	0
	Ag	**107**	**0.142**	ug/L	0.007	5	15	1863	4
	Cd	**111**	**0.776**	ug/L	0.023	2	63	3586	2
	Cd	**114**	**0.702**	ug/L	0.005	0	30	7967	1
	Sb	**121**	**0.045**	ug/L	0.005	10	102	749	8
	Sb	**123**	**0.044**	ug/L	0.005	11	72	550	10
	Ba	**135**	**351.617**	ug/L	2.178	0	11	1423244	1
	Ba	**137**	**344.317**	ug/L	2.932	0	17	2406621	0
>	**Tb**	**159**		ug/L			1160798	1120669	0
	Tl	**205**	**0.134**	ug/L	0.001	0	51	4373	0
	Pb	**208**	**29.457**	ug/L	0.101	0	139	1255687	0
	Bi	**209**		ug/L			2367270	2172168	0
	Th	**232**	**6.167**	ug/L	0.020	0	21	250714	0
	U	**238**	**0.796**	ug/L	0.001	0	3	32916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	653054	1
	Be	9	50.935	ug/L	0.279	0	5	103070	1
	C	13		ug/L			58801	55254	0
	Cl	37		ug/L			3025336	3246034	3
>	Sc	45		ug/L			671354	626960	0
	V	51	49.795	ug/L	0.110	0	5156	656929	0
	V-1	51	49.884	ug/L	0.231	0	130	652932	0
	Cr	52	50.578	ug/L	0.307	0	15247	588304	0
	Cr	53	50.871	ug/L	0.814	1	115	65200	1
	Mn	55	50.110	ug/L	0.318	0	250	784487	0
	Co	59	50.996	ug/L	1.214	2	40	619523	1
>	Ge	72		ug/L			457613	443132	1
	Ni	60	49.433	ug/L	1.488	3	22	132720	1
	Ni	62	50.141	ug/L	1.281	2	29	18948	1
	Cu	63	50.664	ug/L	1.762	3	58	305416	1
	Cu	65	50.750	ug/L	0.599	1	28	138271	0
	Zn	66	50.872	ug/L	1.308	2	143	81777	0
	Zn	67	52.294	ug/L	0.855	1	23	13702	1
	Zn	68	50.542	ug/L	1.778	3	137	58471	1
	As	75	49.700	ug/L	0.885	1	267	74621	0
	As-1	75	50.125	ug/L	1.089	2	8149	82817	0
	Se	82	50.158	ug/L	0.754	1	-5	8166	0
	Se	78	51.653	ug/L	1.517	2	8278	29332	0
	Mo	98	47.489	ug/L	0.999	2	17	204259	1
	Y	89		ug/L			298590	290226	1
	Kr	83		ug/L			554	535	3
>	In	115		ug/L			979916	917463	0
	Ag	107	47.357	ug/L	1.257	2	15	605947	2
	Cd	111	50.402	ug/L	0.091	0	63	225139	0
	Cd	114	50.757	ug/L	0.721	1	30	563681	0
	Sb	121	50.960	ug/L	0.237	0	102	722571	0
	Sb	123	50.197	ug/L	0.690	1	72	545445	0
	Ba	135	50.266	ug/L	1.072	2	11	199954	1
	Ba	137	50.190	ug/L	0.680	1	17	344786	1
>	Tb	159		ug/L			1160798	1065657	0
	Tl	205	52.641	ug/L	0.397	0	51	1617129	0
	Pb	208	51.463	ug/L	0.183	0	139	2085946	0
	Bi	209		ug/L			2367270	2151419	0
	Th	232	52.614	ug/L	0.287	0	21	2033951	0
	U	238	53.008	ug/L	0.660	1	3	2084247	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			726304	638148	0
Be	9	0.001	ug/L	0.002	155	5	7	54
C	13		ug/L			58801	54689	3
Cl	37		ug/L			3025336	3047486	1
Sc	45		ug/L			671354	617720	0
V	51	0.020	ug/L	0.003	14	5156	5007	1
V-1	51	-0.002	ug/L	0.002	99	130	97	23
Cr	52	0.062	ug/L	0.002	3	15247	14722	0
Cr	53	-0.010	ug/L	0.004	35	115	93	4
Mn	55	0.014	ug/L	0.002	18	250	441	9
Co	59	0.001	ug/L	0.001	57	40	49	15
Ge	72		ug/L			457613	446360	1
Ni	60	-0.001	ug/L	0 003	234	22	19	39
Ni	62	0.143	ug/L	0.036	24	29	83	15
Cu	63	0.009	ug/L	0.001	6	58	113	2
Cu	65	0.002	ug/L	0.002	130	28	33	18
Zn	66	-0.007	ug/L	0.007	107	143	128	9
Zn	67	-0.003	ug/L	0.018	641	23	22	20
Zn	68	-0.006	ug/L	0.004	63	137	126	2
As	75	-0.006	ug/L	0.009	141	267	251	5
As-1	75	0.282	ug/L	0.051	18	8149	8373	0
Se	82	-0.028	ug/L	0.024	84	-5	-9	39
Se	78	1.033	ug/L	0.209	20	8278	8504	0
Mo	98	0.011	ug/L	0.002	21	17	64	15
Y	89		ug/L			298590	281163	1
Kr	83		ug/L			554	550	5
In	115		ug/L			979916	926226	0
Ag	107	0.003	ug/L	0.001	48	15	47	33
Cd	111	0.005	ug/L	0.001	17	63	82	5
Cd	114	0.001	ug/L	0.001	81	30	45	30
Sb	121	0.057	ug/L	0.004	7	102	913	6
Sb	123	0.062	ug/L	0.004	6	72	745	5
Ba	135	0.004	ug/L	0.002	44	11	28	26
Ba	137	0.006	ug/L	0.003	48	17	54	34
Tb	159		ug/L			1160798	1035087	0
Tl	205	0.007	ug/L	0.002	37	51	242	29
Pb	208	0.002	ug/L	0.000	16	139	207	6
Bi	209		ug/L			2367270	2178604	0
Th	232	0.082	ug/L	0.011	12	21	3089	13
U	238	0.001	ug/L	0.000	13	3	58	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:15:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	669406	0
	Be	**9**	**0.407**	ug/L	0 012	2	5	848	2
	C	**13**		ug/L			58801	80581	2
	Cl	**37**		ug/L			3025336	3193936	2
>	**Sc**	**45**		ug/L			671354	683285	0
	V	**51**	**35.887**	ug/L	0.251	0	5156	517430	0
	V-1	**51**	**36.082**	ug/L	0.246	0	130	514727	0
	Cr	**52**	**21.298**	ug/L	0.311	1	15247	278958	0
	Cr	**53**	**21.901**	ug/L	0.451	2	115	30657	2
	Mn	**55**	**329.072**	ug/L	3.730	1	250	5613192	1
	Co	**59**	**7.080**	ug/L	0.204	2	40	93768	2
>	**Ge**	**72**		ug/L			457613	455954	0
	Ni	**60**	**15.809**	ug/L	0.272	1	22	43704	2
	Ni	**62**	**17.308**	ug/L	0.370	2	29	6751	2
	Cu	**63**	**20.220**	ug/L	0.031	0	58	125500	0
	Cu	**65**	**20.890**	ug/L	0.754	3	28	58592	3
	Zn	**66**	**108.758**	ug/L	1.460	1	143	179787	1
	Zn	**67**	**108.959**	ug/L	0.867	0	23	29354	0
	Zn	**68**	**108.184**	ug/L	1.985	1	137	128679	2
	As	**75**	**7.705**	ug/L	0.089	1	267	12132	1
	As-1	**75**	**7.849**	ug/L	0.055	0	8149	20194	0
	Se	**82**	**0.414**	ug/L	0.043	10	-5	64	10
	Se	**78**	**1.044**	ug/L	0.214	20	8278	8691	0
	Mo	**98**	**0.459**	ug/L	0.011	2	17	2048	1
	Y	**89**		ug/L			298590	400196	1
	Kr	**83**		ug/L			554	625	2
>	**In**	**115**		ug/L			979916	930629	0
	Ag	**107**	**0.157**	ug/L	0.002	1	15	2056	1
	Cd	**111**	**1.489**	ug/L	0.020	1	63	6806	1
	Cd	**114**	**1.440**	ug/L	0.020	1	30	16254	1
	Sb	**121**	**0.113**	ug/L	0.005	4	102	1716	4
	Sb	**123**	**0.114**	ug/L	0.009	7	72	1327	7
	Ba	**135**	**82.352**	ug/L	0.496	0	11	332298	0
	Ba	**137**	**81.904**	ug/L	0.850	1	17	570729	1
>	**Tb**	**159**		ug/L			1160798	1100079	1
	Tl	**205**	**0.137**	ug/L	0.004	3	51	4382	2
	Pb	**208**	**72.029**	ug/L	0.789	1	139	3013558	1
	Bi	**209**		ug/L			2367270	2170815	0
	Th	**232**	**4.886**	ug/L	0.098	1	21	194989	1
	U	**238**	**2.901**	ug/L	0.038	1	3	117734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:19:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669174	2
	Be	9	0.680	ug/L	0.002	0	5	1415	2
	C	13		ug/L			58801	70255	3
	Cl	37		ug/L			3025336	3104801	1
>	Sc	45		ug/L			671354	700996	0
	V	51	37.182	ug/L	1.136	3	5156	549741	2
	V-1	51	37.576	ug/L	1.008	2	130	549876	1
	Cr	52	29.206	ug/L	0.908	3	15247	386501	2
	Cr	53	30.477	ug/L	0.725	2	115	43717	1
	Mn	55	523.625	ug/L	1.065	0	250	9162946	0
	Co	59	8.756	ug/L	0.220	2	40	118974	2
>	Ge	72		ug/L			457613	451392	1
	Ni	60	24.045	ug/L	0.747	3	22	65780	2
	Ni	62	25.669	ug/L	0.712	2	29	9896	1
	Cu	63	22.795	ug/L	0.366	1	58	140050	1
	Cu	65	23.468	ug/L	0.311	1	28	65150	0
	Zn	66	122.207	ug/L	4.215	3	143	199922	2
	Zn	67	136.089	ug/L	4.558	3	23	36282	2
	Zn	68	130.021	ug/L	3.751	2	137	153037	1
	As	75	9.811	ug/L	0.105	1	267	15218	0
	As-1	75	9.965	ug/L	0.182	1	8149	23214	0
	Se	82	-0.163	ug/L	0.058	35	-5	-32	28
	Se	78	0.820	ug/L	0.289	35	8278	8510	0
	Mo	98	0.375	ug/L	0.017	4	17	1660	4
	Y	89		ug/L			298590	371868	1
	Kr	83		ug/L			554	789	1
>	In	115		ug/L			979916	924672	0
	Ag	107	0.132	ug/L	0.001	1	15	1718	1
	Cd	111	0.775	ug/L	0.020	2	63	3546	2
	Cd	114	0.684	ug/L	0.020	2	30	7680	2
	Sb	121	0.036	ug/L	0.002	5	102	608	3
	Sb	123	0.032	ug/L	0.005	14	72	418	11
	Ba	135	298.166	ug/L	6.317	2	11	1195360	1
	Ba	137	292.927	ug/L	3.240	1	17	2028058	0
>	Tb	159		ug/L			1160798	1096148	1
	Tl	205	0.142	ug/L	0 002	1	51	4546	2
	Pb	208	31.727	ug/L	0.426	1	139	1322698	0
	Bi	209		ug/L			2367270	2152836	0
	Th	232	8.735	ug/L	0.049	0	21	347366	1
	U	238	0.914	ug/L	0.009	0	3	36970	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:24:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			726304	657743	1
	Be	9	0.507	ug/L	0.033	6	5	1037	4
	C	13		ug/L			58801	76553	3
	Cl	37		ug/L			3025336	3137143	1
>	Sc	45		ug/L			671354	685808	1
	V	51	17.329	ug/L	0.328	1	5156	253482	1
	V-1	51	17.346	ug/L	0.317	1	130	248413	1
	Cr	52	15.116	ug/L	0.170	1	15247	203231	1
	Cr	53	15.167	ug/L	0.140	0	115	21344	1
	Mn	55	667.237	ug/L	18.091	2	250	11420270	1
	Co	59	5.260	ug/L	0.164	3	40	69955	4
>	Ge	72		ug/L			457613	456304	2
	Ni	60	14.100	ug/L	0.124	0	22	39006	2
	Ni	62	15.289	ug/L	0.571	3	29	5968	1
	Cu	63	11.816	ug/L	0.138	1	58	73403	1
	Cu	65	12.204	ug/L	0.355	2	28	34249	1
	Zn	66	128.498	ug/L	4.057	3	143	212455	1
	Zn	67	139.135	ug/L	4.668	3	23	37485	0
	Zn	68	137.508	ug/L	6.747	4	137	163512	2
	As	75	8.079	ug/L	0.230	2	267	12711	1
	As-1	75	8.199	ug/L	0 400	4	8149	20738	0
	Se	82	-0.106	ug/L	0.080	75	-5	-23	60
	Se	78	0.566	ug/L	0.704	124	8278	8490	0
	Mo	98	0.340	ug/L	0 016	4	17	1523	2
	Y	89		ug/L			298590	383551	3
	Kr	83		ug/L			554	696	3
>	In	115		ug/L			979916	945372	0
	Ag	107	0.087	ug/L	0.003	3	15	1160	3
	Cd	111	1.873	ug/L	0.025	1	63	8677	1
	Cd	114	1.797	ug/L	0.047	2	30	20592	2
	Sb	121	0.073	ug/L	0.002	2	102	1162	2
	Sb	123	0.074	ug/L	0.004	4	72	903	4
	Ba	135	288.873	ug/L	1.308	0	11	1184091	0
	Ba	137	280.728	ug/L	1.889	0	17	1987154	0
>	Tb	159		ug/L			1160798	1119393	0
	Tl	205	-0.146	ug/L	0.003	2	51	4753	2
	Pb	208	106.225	ug/L	0.593	0	139	4522433	0
	Bi	209		ug/L			2367270	2183517	0
	Th	232	4.535	ug/L	0.012	0	21	184151	0
	U	238	0.575	ug/L	0.013	2	3	23754	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:28:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn Pb Zn
11.16.12
MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	**Li**	**6**		ug/L			726304	660277	1
	Be	**9**	**0.123**	ug/L	0.008	6	5	257	5
	C	**13**		ug/L			58801	63435	0
	Cl	**37**		ug/L			3025336	3067991	4
>	**Sc**	**45**		ug/L			671354	662027	1
	V	**51**	**5.902**	ug/L	0.083	1	5156	86689	1
	V-1	**51**	**6.017**	ug/L	0.092	1	130	83258	0
	Cr	**52**	**10.575**	ug/L	0.191	1	15247	141756	0
	Cr	**53**	**10.963**	ug/L	0.304	2	115	14921	1
	Mn	**55**	**139.939**	ug/L	1.097	0	250	2312815	1
	Co	**59**	**2.113**	ug/L	0.057	2	40	27145	1
>	**Ge**	**72**		ug/L			457613	449855	1
	Ni	**60**	**5.476**	ug/L	0.094	1	22	14948	0
	Ni	**62**	**5.912**	ug/L	0.180	3	29	2294	4
	Cu	**63**	**6.348**	ug/L	0.157	2	58	38914	2
	Cu	**65**	**6.577**	ug/L	0.087	1	28	18218	1
	Zn	**66**	**114.834**	ug/L	4.549	3	143	187227	2
	Zn	**67**	**108.058**	ug/L	1.654	1	23	28723	1
	Zn	**68**	**111.601**	ug/L	3.758	3	137	130930	2
	As	**75**	**4.779**	ug/L	0.054	1	267	7523	1
	As-1	**75**	**5.014**	ug/L	0.169	3	8149	15620	0
	Se	**82**	**0.078**	ug/L	0.022	27	-5	7	47
	Se	**78**	**0.941**	ug/L	0.446	47	8278	8531	1
	Mo	**98**	**0.083**	ug/L	0.006	7	17	377	7
	Y	**89**		ug/L			298590	324782	0
	Kr	**83**		ug/L			554	560	2
>	**In**	**115**		ug/L			979916	934916	1
	Ag	**107**	**0.057**	ug/L	0.002	3	15	760	3
	Cd	**111**	**2.931**	ug/L	0.051	1	63	13398	1
	Cd	**114**	**2.948**	ug/L	0.061	2	30	33380	0
	Sb	**121**	**0.053**	ug/L	0.000	0	102	856	1
	Sb	**123**	**0.054**	ug/L	0.004	8	72	665	8
	Ba	**135**	**43.224**	ug/L	0.522	1	11	175226	1
	Ba	**137**	**42.392**	ug/L	0.102	0	17	296765	0
>	**Tb**	**159**		ug/L			1160798	1072424	0
	Tl	**205**	**0.111**	ug/L	0.001	0	51	3477	1
	Pb	**208**	**84.415**	ug/L	0.475	0	139	3443084	0
	Bi	**209**		ug/L			2367270	2206189	0
	Th	**232**	**1.240**	ug/L	0.010	0	21	48239	0
	U	**238**	**0.166**	ug/L	0.003	1	3	6578	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:32:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	665866	0
	Be	**9**	**0.564**	ug/L	0.003	0	5	1168	0
	C	**13**		ug/L			58801	86475	4
	Cl	**37**		ug/L			3025336	3153528	0
>	**Sc**	**45**		ug/L			671354	705952	0
	V	**51**	**28.815**	ug/L	0.566	1	5156	430315	1
	V-1	**51**	**29.088**	ug/L	0.289	0	130	428742	0
	Cr	**52**	**50.609**	ug/L	1.449	2	15247	662765	2
	Cr	**53**	**51.554**	ug/L	1.592	3	115	74389	2
	Mn	**55**	**644.019**	ug/L	8.250	1	250	11348910	0
	Co	**59**	**9.783**	ug/L	0.085	0	40	133878	1
>	**Ge**	**72**		ug/L			457613	449480	0
	Ni	**60**	**27.394**	ug/L	0.094	0	22	74637	0
	Ni	**62**	**29.370**	ug/L	1.047	3	29	11273	3
	Cu	**63**	**31.639**	ug/L	0.429	1	58	193560	1
	Cu	**65**	**32.121**	ug/L	0.736	2	28	88797	2
	Zn	**66**	**550.649**	ug/L	8.791	1	143	896736	1
	Zn	**67**	**524.104**	ug/L	4.641	0	23	139110	1
	Zn	**68**	**544.587**	ug/L	8.982	1	137	637972	1
	As	**75**	**23.702**	ug/L	0.270	1	267	36241	1
	As-1	**75**	**23.922**	ug/L	0.302	1	8149	44284	1
	Se	**82**	**0.176**	ug/L	0.105	59	-5	23	72
	Se	**78**	**1.244**	ug/L	0.173	13	8278	8652	0
	Mo	**98**	**0.425**	ug/L	0.017	3	17	1870	3
	Y	**89**		ug/L			298590	439800	0
	Kr	**83**		ug/L			554	728	3
>	**In**	**115**		ug/L			979916	978306	1
	Ag	**107**	**0.250**	ug/L	0.010	4	15	3429	3
	Cd	**111**	**13.687**	ug/L	0.071	0	63	65234	0
	Cd	**114**	**13.694**	ug/L	0.178	1	30	162189	0
	Sb	**121**	**0.245**	ug/L	0.010	3	102	3806	2
	Sb	**123**	**0.238**	ug/L	0.005	1	72	2832	1
	Ba	**135**	**208.286**	ug/L	5.230	2	11	883366	1
	Ba	**137**	**207.928**	ug/L	3.046	1	17	1522968	0
>	**Tb**	**159**		ug/L			1160798	1122794	0
	Tl	**205**	**0.522**	ug/L	0.008	1	51	16955	1
	Pb	**208**	**390.055**	ug/L	2.097	0	139	16656267	0
	Bi	**209**		ug/L			2367270	2197146	0
	Th	**232**	**5.886**	ug/L	0.058	0	21	239765	0
	U	**238**	**0.802**	ug/L	0.005	0	3	33236	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:36:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

cc Mn 11.16.12 MD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	682210	1
	Be	9	0.946	ug/L	0.036	3	5	2003	2
	C	13		ug/L			58801	88206	3
	Cl	37		ug/L			3025336	3220928	1
>	Sc	45		ug/L			671354	714096	1
	V	51	28.808	ug/L	0.700	2	5156	435110	1
	V-1	51	28.997	ug/L	0.762	2	130	432258	1
	Cr	52	28.944	ug/L	0.532	1	15247	390315	0
	Cr	53	29.561	ug/L	0.615	2	115	43193	0
	Mn	55	1267.402	ug/L	30.160	2	250	22588239	1
	Co	59	17.782	ug/L	0.060	0	40	246102	1
>	Ge	72		ug/L			457613	455857	0
	Ni	60	41.561	ug/L	0.607	1	22	114833	1
	Ni	62	43.462	ug/L	0.815	1	29	16904	1
	Cu	63	34.594	ug/L	0.774	2	58	214645	2
	Cu	65	35.502	ug/L	0.285	0	28	99528	1
	Zn	66	189.077	ug/L	0.787	0	143	312378	0
	Zn	67	196.555	ug/L	3.707	1	23	52923	1
	Zn	68	199.365	ug/L	5.140	2	137	236945	2
	As	75	17.851	ug/L	0.052	0	267	27747	0
	As-1	75	17.977	ug/L	0.026	0	8149	35768	0
	Se	82	< -0.016	ug/L	0.026	157	-5	-8	53
	Se	78	0.951	ug/L	0.108	11	8278	8651	0
	Mo	98	1.116	ug/L	0.014	1	17	4956	0
	Y	89		ug/L			298590	491114	1
	Kr	83		ug/L			554	858	2
>	In	115		ug/L			979916	934135	2
	Ag	107	< 0.186	ug/L	0.007	3	15	2440	3
	Cd	111	3.351	ug/L	0.084	2	63	15288	0
	Cd	114	3.182	ug/L	0.054	1	30	36003	0
	Sb	121	< 0.130	ug/L	0.005	3	102	1977	1
	Sb	123	0.135	ug/L	0.004	3	72	1556	1
	Ba	135	248.316	ug/L	8.423	3	11	1005223	1
	Ba	137	249.377	ug/L	4.231	1	17	1743825	1
>	Tb	159		ug/L			1160798	1122418	2
	Tl	205	0.236	ug/L	0.010	4	51	7668	1
	Pb	208	106.027	ug/L	3.003	2	139	4524052	0
	Bi	209		ug/L			2367270	2143333	1
	Th	232	7.142	ug/L	0.123	1	21	290753	1
	U	238	1.081	ug/L	0.033	3	3	44751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:42:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	654111	1
	Be	9	0.564	ug/L	0.019	3	5	1148	1
	C	13		ug/L			58801	77009	2
	Cl	37		ug/L			3025336	3032412	1
>	Sc	45		ug/L			671354	695448	1
	V	51	30.830	ug/L	1.145	3	5156	453066	2
	V-1	51	30.859	ug/L	1.219	3	130	447937	2
	Cr	52	17.705	ug/L	0.178	1	15247	238676	0
	Cr	53	17.765	ug/L	0.332	1	115	25330	0
	Mn	55	863.901	ug/L	23.840	2	250	14994078	1
	Co	59	7.032	ug/L	0.257	3	40	94793	3
>	Ge	72		ug/L			457613	456027	0
	Ni	60	13.888	ug/L	0.152	1	22	38399	0
	Ni	62	15.079	ug/L	0.504	3	29	5886	3
	Cu	63	12.199	ug/L	0.323	2	58	75746	2
	Cu	65	12.739	ug/L	0.236	1	28	35747	2
	Zn	66	184.237	ug/L	6.900	3	143	304457	3
	Zn	67	186.502	ug/L	3.339	1	23	50238	2
	Zn	68	186.679	ug/L	2.744	1	137	221961	1
	As	75	14.218	ug/L	0.042	0	267	22163	0
	As-1	75	14.461	ug/L	0.082	0	8149	30370	0
	Se	82	-0.107	ug/L	0.067	62	-5	-23	47
	Se	78	1.034	ug/L	0.150	14	8278	8689	0
	Mo	98	0.389	ug/L	0.010	2	17	1737	3
	Y	89		ug/L			298590	366460	1
	Kr	83		ug/L			554	719	3
>	In	115		ug/L			979916	940423	1
	Ag	107	0.094	ug/L	0.003	3	15	1251	2
	Cd	111	2.428	ug/L	0.092	3	63	11170	2
	Cd	114	2.391	ug/L	0.070	2	30	27236	1
	Sb	121	0.185	ug/L	0.007	3	102	2791	2
	Sb	123	0.187	ug/L	0.008	4	72	2149	2
	Ba	135	247.443	ug/L	8.280	3	11	1008614	1
	Ba	137	245.503	ug/L	7.146	2	17	1728208	1
>	Tb	159		ug/L			1160798	1100374	1
	Tl	205	0.217	ug/L	0.006	2	51	6922	1
	Pb	208	125.130	ug/L	3.348	2	139	5235412	1
	Bi	209		ug/L			2367270	2156542	0
	Th	232	5.759	ug/L	0.225	3	21	229816	2
	U	238	0.550	ug/L	0.010	1	3	22321	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:46:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AK~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	667813	2
	Be	9	1.028	ug/L	0.009	0	5	2132	3
	C	13		ug/L			58801	70718	1
	Cl	37		ug/L			3025336	3124918	1
>	Sc	45		ug/L			671354	728616	1
	V	51	35.473	ug/L	0.502	1	5156	545479	2
	V-1	51	35.701	ug/L	0.656	1	130	543057	1
	Cr	52	38.421	ug/L	0.236	0	15247	523315	1
	Cr	53	39.173	ug/L	1.085	2	115	58360	1
	Mn	55	794.786	ug/L	15.153	1	250	14453630	0
	Co	59	9.691	ug/L	0.212	2	40	136840	0
>	Ge	72		ug/L			457613	452968	1
	Ni	60	31.588	ug/L	0.721	2	22	86714	1
	Ni	62	34.544	ug/L	1.143	3	29	13355	2
	Cu	63	35.520	ug/L	0.870	2	58	218945	1
	Cu	65	36.683	ug/L	0.638	1	28	102180	1
	Zn	66	172.125	ug/L	6.565	3	143	282507	2
	Zn	67	185.298	ug/L	2.461	1	23	49575	0
	Zn	68	179.224	ug/L	3.091	1	137	211659	0
	As	75	10.408	ug/L	0.217	2	267	16184	1
	As-1	75	10.593	ug/L	0.260	2	8149	24253	0
	Se	82	-0.098	ug/L	0.020	20	-5	-21	15
	Se	78	1.243	ug/L	0.188	15	8278	8718	0
	Mo	98	0.543	ug/L	0.006	1	17	2404	1
	Y	89		ug/L			298590	554725	1
	Kr	83		ug/L			554	925	3
>	In	115		ug/L			979916	924382	1
	Ag	107	0.476	ug/L	0.009	1	15	6152	1
	Cd	111	1.064	ug/L	0.038	3	63	4846	3
	Cd	114	0.851	ug/L	0.021	2	30	9554	1
	Sb	121	0.042	ug/L	0.001	2	102	692	2
	Sb	123	0.042	ug/L	0.002	4	72	522	3
	Ba	135	298.621	ug/L	4.371	1	11	1196747	0
	Ba	137	290.337	ug/L	2.599	0	17	2009421	0
>	Tb	159		ug/L			1160798	1126736	0
	Tl	205	0.186	ug/L	0.006	3	51	6082	2
	Pb	208	26.887	ug/L	0.265	0	139	1152291	0
	Bi	209		ug/L			2367270	2133097	0
	Th	232	8.379	ug/L	0.115	1	21	342472	0
	U	238	2.031	ug/L	0.025	1	3	84421	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 400
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:50:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn Ba~~ Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	636136	1
	Be	**9**	**0.041**	ug/L	0.003	7	5	85	7
	C	**13**		ug/L			58801	61326	2
	Cl	**37**		ug/L			3025336	3058642	2
>	**Sc**	**45**		ug/L			671354	632888	0
	V	**51**	**1.298**	ug/L	0.033	2	5156	22017	1
	V-1	**51**	**1.304**	ug/L	0.035	2	130	17341	2
	Cr	**52**	**1.003**	ug/L	0.030	3	15247	25864	1
	Cr	**53**	**1.021**	ug/L	0.022	2	115	1427	2
	Mn	**55**	**124.604**	ug/L	3.450	2	250	1968617	2
	Co	**59**	**0.386**	ug/L	0.001	0	40	4772	0
>	**Ge**	**72**		ug/L			457613	444686	1
	Ni	**60**	**0.797**	ug/L	0.019	2	22	2168	1
	Ni	**62**	**0.903**	ug/L	0.069	7	29	371	8
	Cu	**63**	**1.174**	ug/L	0.030	2	58	7157	1
	Cu	**65**	**1.198**	ug/L	0.039	3	28	3302	3
	Zn	**66**	**25.175**	ug/L	0.267	1	143	40689	0
	Zn	**67**	**25.964**	ug/L	0.638	2	23	6838	1
	Zn	**68**	**25.970**	ug/L	0.246	0	137	30224	0
	As	**75**	**0.899**	ug/L	0.030	3	267	1609	2
	As-1	**75**	**1.215**	ug/L	0.081	6	8149	9740	0
	Se	**82**	**0.089**	ug/L	0.059	65	-5	9	102
	Se	**78**	**1.165**	ug/L	0.239	20	8278	8526	0
	Mo	**98**	**0.017**	ug/L	0.001	4	17	91	3
	Y	**89**		ug/L			298590	298434	1
	Kr	**83**		ug/L			554	506	1
>	**In**	**115**		ug/L			979916	941485	1
	Ag	**107**	**0.009**	ug/L	0.000	3	15	129	2
	Cd	**111**	**0.288**	ug/L	0.005	1	63	1379	1
	Cd	**114**	**0.289**	ug/L	0.009	3	30	3318	1
	Sb	**121**	**0.011**	ug/L	0.002	16	102	256	9
	Sb	**123**	**0.012**	ug/L	0.002	19	72	207	11
	Ba	**135**	**37.630**	ug/L	0.775	2	11	153598	0
	Ba	**137**	**37.562**	ug/L	0.159	0	17	264796	0
>	**Tb**	**159**		ug/L			1160798	1052930	0
	Tl	**205**	**0.017**	ug/L	0.001	3	51	563	3
	Pb	**208**	**13.938**	ug/L	0.179	1	139	558265	1
	Bi	**209**		ug/L			2367270	2205197	0
	Th	**232**	**0.296**	ug/L	0.003	1	21	11334	1
	U	**238**	**0.028**	ug/L	0.001	2	3	1087	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	653170	1
	Be	9	0.761	ug/L	0.013	1	5	1545	1
	C	13		ug/L			58801	81288	3
	Cl	37		ug/L			3025336	3033576	0
>	Sc	45		ug/L			671354	706731	2
	V	51	23.449	ug/L	1.012	4	5156	351351	2
	V-1	51	23.534	ug/L	0.987	4	130	347072	2
	Cr	52	16.990	ug/L	0.519	3	15247	233317	0
	Cr	53	17.253	ug/L	0.439	2	115	24996	1
	Mn	55	2150.704	ug/L	61.340	2	250	37926409	0
	Co	59	6.627	ug/L	0.107	1	40	90797	2
>	Ge	72		ug/L			457613	456813	1
	Ni	60	14.680	ug/L	0.036	0	22	40660	1
	Ni	62	15.894	ug/L	0.225	1	29	6214	2
	Cu	63	21.081	ug/L	0.744	3	58	131045	1
	Cu	65	22.443	ug/L	0.785	3	28	63083	5
	Zn	66	449.072	ug/L	12.922	2	143	743120	2
	Zn	67	461.213	ug/L	1.219	0	23	124416	1
	Zn	68	464.143	ug/L	13.107	2	137	552468	1
	As	75	16.738	ug/L	0.287	1	267	26085	0
	As-1	75	16.850	ug/L	0.367	2	8149	34099	0
	Se	82	0.088	ug/L	0.205	232	-5	9	378
	Se	78	0.728	ug/L	0.390	53	8278	8572	0
	Mo	98	0.375	ug/L	0.020	5	17	1677	3
	Y	89		ug/L			298590	396305	2
	Kr	83		ug/L			554	710	11
>	In	115		ug/L			979916	958845	1
	Ag	107	0.160	ug/L	0.009	5	15	2153	4
	Cd	111	5.550	ug/L	0.089	1	63	25960	0
	Cd	114	5.416	ug/L	0.073	1	30	62884	0
	Sb	121	0.261	ug/L	0.009	3	102	3971	1
	Sb	123	0.258	ug/L	0.005	2	72	2998	3
	Ba	135	748.464	ug/L	13.025	1	11	3111128	0
	Ba	137	743.815	ug/L	14.705	1	17	5339048	0
>	Tb	159		ug/L			1160798	1120387	0
	Tl	205	0.303	ug/L	0.003	0	51	9821	1
	Pb	208	257.186	ug/L	2.655	1	139	10958566	0
	Bi	209		ug/L			2367270	2196515	0
	Th	232	5.193	ug/L	0.079	1	21	211053	0
	U	238	0.506	ug/L	0.003	0	3	20936	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			726304	635238 ✓	1
	Be	9	54.646	ug/L	1.333	2	5	107543	1
	C	13		ug/L			58801	56029	2
	Cl	37		ug/L			3025336	3144406	1
>	Sc	45		ug/L			671354	623256 ✓	1
	V	51	50.192	ug/L	0.175	0	5156	658203	0
	V-1	51	50.479	ug/L	0.474	0	130	656770	0
	Cr	52	50.519	ug/L	0.540	1	15247	584145	1
	Cr	53	51.457	ug/L	0.988	1	115	65550	1
	Mn	55	50.346	ug/L	0.069	0	250	783508	1
	Co	59	51.843	ug/L	1.826	3	40	626010	2
>	Ge	72		ug/L			457613	453894 ✓	1
	Ni	60	48.799	ug/L	0.890	1	22	134224	0
	Ni	62	50.125	ug/L	1.243	2	29	19407	2
	Cu	63	49.427	ug/L	0.655	1	58	305288	0
	Cu	65	49.250	ug/L	0.593	1	28	137449	0
	Zn	66	49.719	ug/L	1.167	2	143	81876	1
	Zn	67	50.015	ug/L	0.460	0	23	13426	1
	Zn	68	49.375	ug/L	0.301	0	137	58532	0
	As	75	48.609	ug/L	0.318	0	267	74773	1
	As-1	75	48.872	ug/L	0.661	1	8149	82922	0
	Se	82	49.155	ug/L	0.122	0	-5	8198	1
	Se	78	50.030	ug/L	1.282	2	8278	29361	0
	Mo	98	46.368	ug/L	0.696	1	17	204295	1
	Y	89		ug/L			298590	287369	0
	Kr	83		ug/L			554	528	2
>	In	115		ug/L			979916	909941 ✓	2
	Ag	107	48.363	ug/L	0.269	0	15	613832	2
	Cd	111	50.995	ug/L	0.236	0	63	225903	1
	Cd	114	51.124	ug/L	0.586	1	30	563049	0
	Sb	121	50.900	ug/L	0.971	1	102	715631	0
	Sb	123	50.958	ug/L	0 807	1	72	549082	0
	Ba	135	50.546	ug/L	0.847	1	11	199395	0
	Ba	137	50.006	ug/L	0.792	1	17	340645	0
>	Tb	159		ug/L			1160798	1051076 ✓	0
	Tl	205	52.483	ug/L	0 137	0	51	1590218	0
	Pb	208	51.498	ug/L	0.261	0	139	2058738	0
	Bi	209		ug/L			2367270	2129498	0
	Th	232	52.911	ug/L	0.476	0	21	2017351	0
	U	238	53.047	ug/L	0.501	0	3	2057180	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:05:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635099 ✓	1
	Be	9	0.002	ug/L	0.001	56	5	9	24
	C	13		ug/L			58801	55687	1
	Cl	37		ug/L			3025336	3023678	0
>	Sc	45		ug/L			671354	615760 ✓	1
	V	51	0.030	ug/L	0.012	40	5156	5115	4
	V-1	51	0.005	ug/L	0.000	3	130	187	1
	Cr	52	0.097	ug/L	0.043	44	15247	15064	4
	Cr	53	0.016	ug/L	0.004	24	115	126	4
	Mn	55	0.037	ug/L	0.045	123	250	797	88
	Co	59	0.002	ug/L	0.002	82	40	65	36
>	Ge	72		ug/L			457613	436174 ✓	0
	Ni	60	0.001	ug/L	0.002	247	22	23	21
	Ni	62	0.075	ug/L	0.022	29	29	56	14
	Cu	63	0.007	ug/L	0.002	21	58	99	9
	Cu	65	0.003	ug/L	0 001	20	28	36	5
	Zn	66	0.003	ug/L	0.007	225	143	141	8
	Zn	67	0.022	ug/L	0.018	80	23	28	15
	Zn	68	0.010	ug/L	0.003	25	137	142	2
	As	75	-0.012	ug/L	0.013	107	267	237	7
	As-1	75	0.412	ug/L	0.066	16	8149	8373	0
	Se	82	0.042	ug/L	0.018	41	-5	1	170
	Se	78	1.543	ug/L	0.228	14	8278	8517	0
	Mo	98	0.007	ug/L	0.003	35	17	46	23
	Y	89		ug/L			298590	280384	1
	Kr	83		ug/L			554	512	1
>	In	115		ug/L			979916	898103 ✓	1
	Ag	107	0.002	ug/L	0.001	44	15	38	27
	Cd	111	0.006	ug/L	0.005	84	63	82	24
	Cd	114	0.002	ug/L	0.001	65	30	49	27
	Sb	121	0.054	ug/L	0.003	5	102	838	3
	Sb	123	0.053	ug/L	0.005	9	72	629	7
	Ba	135	0.013	ug/L	0.016	128	11	60	104
	Ba	137	0.010	ug/L	0.013	124	17	83	100
>	Tb	159		ug/L			1160798	1002039 ✓	0
	Tl	205	0.010	ug/L	0.005	50	51	319	43
	Pb	208	0.006	ug/L	0.006	98	139	364	65
	Bi	209		ug/L			2367270	2132633	0
	Th	232	0.087	ug/L	0.004	4	21	3194	5
	U	238	0.002	ug/L	0.002	81	3	81	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:12:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	626341	2
	Be	9	0.002	ug/L	0.002	144	5	8	54
	C	13		ug/L			58801	58031	1
	Cl	37		ug/L			3025336	3022541	1
>	Sc	45		ug/L			671354	623819	4
	V	51	0.023	ug/L	0.018	77	5156	5084	0
	V-1	51	0.004	ug/L	0.001	25	130	173	11
	Cr	52	0.079	ug/L	0.066	83	15247	15041	0
	Cr	53	0.017	ug/L	0.005	30	115	129	0
	Mn	55	0.020	ug/L	0.001	7	250	549	1
	Co	59	0.003	ug/L	0.001	34	40	71	12
>	Ge	72		ug/L			457613	435796	2
	Ni	60	0.003	ug/L	0.001	27	22	29	5
	Ni	62	0.035	ug/L	0.013	35	29	41	9
	Cu	63	0.038	ug/L	0.004	11	58	282	8
	Cu	65	0.035	ug/L	0.001	3	28	120	3
	Zn	66	0.095	ug/L	0 007	7	143	286	5
	Zn	67	0.081	ug/L	0.008	9	23	43	6
	Zn	68	0.086	ug/L	0.023	27	137	229	13
	As	75	-0.002	ug/L	0.027	1323	267	252	16
	As-1	75	0.431	ug/L	0.052	12	8149	8393	1
	Se	82	-0.001	ug/L	0.106	9193	-5	-5	326
	Se	78	1.592	ug/L	0.225	14	8278	8529	1
	Mo	98	0.001	ug/L	0.001	175	17	18	24
	Y	89		ug/L			298590	283029	2
	Kr	83		ug/L			554	542	7
>	In	115		ug/L			979916	894967	2
	Ag	107	0.001	ug/L	0.000	29	15	24	15
	Cd	111	0.001	ug/L	0.001	44	63	64	6
	Cd	114	0.000	ug/L	0.000	52	30	32	6
	Sb	121	0.013	ug/L	0.002	15	102	279	13
	Sb	123	0.015	ug/L	0.001	9	72	223	9
	Ba	135	0.009	ug/L	0.002	21	11	46	17
	Ba	137	0.008	ug/L	0.001	8	17	70	3
>	Tb	159		ug/L			1160798	992514	0
	Tl	205	0.004	ug/L	0.001	27	51	163	19
	Pb	208	0.003	ug/L	0.001	25	139	240	12
	Bi	209		ug/L			2367270	2130335	1
	Th	232	0.056	ug/L	0.008	14	21	2017	14
	U	238	0.000	ug/L	0.000	10	3	17	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:16:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	652734	2
	Be	9	27.491	ug/L	0.079	0	5	55606	2
	C	13		ug/L			58801	56855	2
	Cl	37		ug/L			3025336	3038043	2
>	Sc	45		ug/L			671354	633444	2
	V	51	26.285	ug/L	0.710	2	5156	352538	1
	V-1	51	26.420	ug/L	0.764	2	130	349307	1
	Cr	52	26.430	ug/L	0.432	1	15247	317390	0
	Cr	53	26.870	ug/L	0.645	2	115	34831	0
	Mn	55	26.487	ug/L	1.009	3	250	418811	1
	Co	59	26.465	ug/L	0.123	0	40	324870	1
>	Ge	72		ug/L			457613	446398	0
	Ni	60	26.648	ug/L	0.158	0	22	72106	0
	Ni	62	27.107	ug/L	0.266	0	29	10335	1
	Cu	63	26.636	ug/L	0.556	2	58	161834	1
	Cu	65	27.518	ug/L	0.357	1	28	75550	1
	Zn	66	85.447	ug/L	2.259	2	143	138301	2
	Zn	67	79.871	ug/L	2.485	3	23	21071	2
	Zn	68	83.115	ug/L	1.092	1	137	96814	1
	As	75	25.998	ug/L	0.176	0	267	39453	0
	As-1	75	26.486	ug/L	0.279	1	8149	47840	0
	Se	82	83.066	ug/L	0.901	1	-5	13629	0
	Se	78	84.938	ug/L	1.214	1	8278	43396	0
	Mo	98	24.281	ug/L	0.259	1	17	105231	1
	Y	89		ug/L			298590	289391	2
	Kr	83		ug/L			554	536	3
>	In	115		ug/L			979916	921269	0
	Ag	107	25.250	ug/L	0.489	1	15	324433	1
	Cd	111	26.013	ug/L	0.222	0	63	116699	0
	Cd	114	26.128	ug/L	0.175	0	30	291394	0
	Sb	121	25.908	ug/L	0.047	0	102	368928	0
	Sb	123	25.910	ug/L	0.371	1	72	282730	0
	Ba	135	26.228	ug/L	0.372	1	11	104776	1
	Ba	137	26.300	ug/L	0.197	0	17	181427	0
>	Tb	159		ug/L			1160798	1042846	0
	Tl	205	28.103	ug/L	0.113	0	51	844874	0
	Pb	208	27.602	ug/L	0.342	1	139	1094874	0
	Bi	209		ug/L			2367270	2199658	0
	Th	232	27.541	ug/L	0.383	1	21	1041878	1
	U	238	27.701	ug/L	0.127	0	3	1065863	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:21:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			726304	659810	3
	Be	**9**	**0.149**	ug/L	0.004	2	5	310	4
	C	**13**		ug/L			58801	65054	0
	Cl	**37**		ug/L			3025336	3122149	1
>	**Sc**	**45**		ug/L			671354	639983	0
	V	**51**	**6.811**	ug/L	0.144	2	5156	95961	1
	V-1	**51**	**6.880**	ug/L	0.140	2	130	92020	1
	Cr	**52**	**8.956**	ug/L	0.175	1	15247	118292	1
	Cr	**53**	**9.186**	ug/L	0.194	2	115	12106	1
	Mn	**55**	**411.530**	ug/L	13.290	3	250	6574111	2
	Co	**59**	**2.147**	ug/L	0.039	1	40	26664	1
>	**Ge**	**72**		ug/L			457613	458183	1
	Ni	**60**	**6.064**	ug/L	0.110	1	22	16857	1
	Ni	**62**	**6.423**	ug/L	0.186	2	29	2535	1
	Cu	**63**	**4.560**	ug/L	0.044	0	58	28490	2
	Cu	**65**	**4.631**	ug/L	0.051	1	28	13071	1
	Zn	**66**	**32.399**	ug/L	0.131	0	143	53919	1
	Zn	**67**	**37.328**	ug/L	0.455	1	23	10120	1
	Zn	**68**	**36.413**	ug/L	0.560	1	137	43608	1
	As	**75**	**1.929**	ug/L	0.029	1	267	3252	0
	As-1	**75**	**2.102**	ug/L	0 053	2	8149	11408	0
	Se	**82**	**0.132**	ug/L	0.077	58	-5	16	76
	Se	**78**	**0.673**	ug/L	0.162	24	8278	8575	0
	Mo	**98**	**0.111**	ug/L	0.004	3	17	508	2
	Y	**89**		ug/L			298590	314998	1
	Kr	**83**		ug/L			554	511	2
>	**In**	**115**		ug/L			979916	938320	1
	Ag	**107**	**0.026**	ug/L	0.002	6	15	349	7
	Cd	**111**	**0.614**	ug/L	0.005	0	63	2864	1
	Cd	**114**	**0.591**	ug/L	0.017	2	30	6743	1
	Sb	**121**	**0.042**	ug/L	0.003	6	102	706	7
	Sb	**123**	**0.043**	ug/L	0.003	6	72	543	6
	Ba	**135**	**118.089**	ug/L	1.203	1	11	480432	1
	Ba	**137**	**116.205**	ug/L	2.052	1	17	816284	0
>	**Tb**	**159**		ug/L			1160798	1053119	1
	Tl	**205**	**0.060**	ug/L	0.001	1	51	1882	0
	Pb	**208**	**29.278**	ug/L	0.287	0	139	1172753	0
	Bi	**209**		ug/L			2367270	2210131	0
	Th	**232**	**0.934**	ug/L	0.100	10	21	35715	10
	U	**238**	**0.101**	ug/L	0.004	3	3	3937	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:25:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~xx Mn, Ba~~ 200x

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	658425	1
	Be	**9**	**0.738**	ug/L	0.017	2	5	1510	1
	C	**13**		ug/L			58801	91809	1
	Cl	**37**		ug/L			3025336	3121092	0
>	**Sc**	**45**		ug/L			671354	708733	0
	V	**51**	**32.110**	ug/L	0.580	1	5156	480751	0
	V-1	**51**	**32.027**	ug/L	0.347	1	130	473892	0
	Cr	**52**	**42.379**	ug/L	1.064	2	15247	559748	1
	Cr	**53**	**42.130**	ug/L	0.213	0	115	61057	0
	Mn	**55**	**1883.119**	ug/L	26.628	1	250	33314547	1
	Co	**59**	**9.767**	ug/L	0.008	0	40	134185	0
>	**Ge**	**72**		ug/L			457613	458066	0
	Ni	**60**	**30.272**	ug/L	0.197	0	22	84048	0
	Ni	**62**	**32.351**	ug/L	0.731	2	29	12651	2
	Cu	**63**	**22.539**	ug/L	0.451	1	58	140530	1
	Cu	**65**	**22.870**	ug/L	0.112	0	28	64435	1
	Zn	**66**	**153.550**	ug/L	3.407	2	143	254914	1
	Zn	**67**	**178.161**	ug/L	1.761	0	23	48204	0
	Zn	**68**	**169.099**	ug/L	5.740	3	137	201948	2
	As	**75**	**9.640**	ug/L	0.130	1	267	15180	0
	As-1	**75**	**9.784**	ug/L	0.160	1	8149	23277	0
	Se	**82**	**-0.006**	ug/L	0.063	1126	-5	-6	169
	Se	**78**	**0.809**	ug/L	0.102	12	8278	8631	0
	Mo	**98**	**0.403**	ug/L	0.012	3	17	1807	2
	Y	**89**		ug/L			298590	394045	0
	Kr	**83**		ug/L			554	731	3
>	**In**	**115**		ug/L			979916	927280	0
	Ag	**107**	**0.109**	ug/L	0.005	4	15	1429	4
	Cd	**111**	**2.968**	ug/L	0.055	1	63	13454	2
	Cd	**114**	**2.890**	ug/L	0.040	1	30	32470	1
	Sb	**121**	**0.113**	ug/L	0.003	3	102	1715	2
	Sb	**123**	**0.118**	ug/L	0 006	5	72	1365	4
	Ba	**135**	**602.318**	ug/L	6.484	1	11	2421603	0
	Ba	**137**	**592.169**	ug/L	2.462	0	17	4111490	0
>	**Tb**	**159**		ug/L			1160798	1090266	0
	Tl	**205**	**0.260**	ug/L	0.006	2	51	8220	1
	Pb	**208**	**141.780**	ug/L	0.982	0	139	5879097	0
	Bi	**209**		ug/L			2367270	2161536	0
	Th	**232**	**3.575**	ug/L	0.035	0	21	141404	1
	U	**238**	**0.489**	ug/L	0.007	1	3	19667	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:29:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660484	1
	Be	9	0.692	ug/L	0.035	5	5	1420	3
	C	13		ug/L			58801	96600	1
	Cl	37		ug/L			3025336	3188144	1
>	Sc	45		ug/L			671354	700601	0
	V	51	31.403	ug/L	0.693	2	5156	464916	1
	V-1	51	31.630	ug/L	0.860	2	130	462649	2
	Cr	52	42.696	ug/L	0.715	1	15247	557419	1
	Cr	53	43.465	ug/L	1.149	2	115	62263	2
	Mn	55	1813.932	ug/L	25.407	1	250	31722585	0
	Co	59	9.095	ug/L	0.068	0	40	123512	0
>	Ge	72		ug/L			457613	451524	1
	Ni	60	29.754	ug/L	0.416	1	22	81422	0
	Ni	62	32.092	ug/L	1.039	3	29	12367	1
	Cu	63	21.961	ug/L	0.414	1	58	134952	0
	Cu	65	22.411	ug/L	0.507	2	28	62226	0
	Zn	66	153.158	ug/L	2.241	1	143	250621	0
	Zn	67	179.789	ug/L	6.313	3	23	47935	2
	Zn	68	171.662	ug/L	2.773	1	137	202074	0
	As	75	9.733	ug/L	0.033	0	267	15104	1
	As-1	75	9.983	ug/L	0.131	1	8149	23247	0
	Se	82	0.025	ug/L	0.019	75	-5	-1	281
	Se	78	1.216	ug/L	0.387	31	8278	8678	0
	Mo	98	0.411	ug/L	0.022	5	17	1819	3
	Y	89		ug/L			298590	385227	1
	Kr	83		ug/L			554	715	0
>	In	115		ug/L			979916	930091	1
	Ag	107	0.111	ug/L	0.007	6	15	1448	5
	Cd	111	2.896	ug/L	0.068	2	63	13170	2
	Cd	114	2.805	ug/L	0.014	0	30	31601	1
	Sb	121	0.104	ug/L	0.007	6	102	1595	4
	Sb	123	0.106	ug/L	0.005	5	72	1236	3
	Ba	135	603.049	ug/L	9.409	1	11	2431548	0
	Ba	137	588.890	ug/L	17.888	3	17	4099548	1
>	Tb	159		ug/L			1160798	1091942	1
	Tl	205	0.257	ug/L	0.002	0	51	8138	0
	Pb	208	137.098	ug/L	1.730	1	139	5693255	0
	Bi	209		ug/L			2367270	2134355	1
	Th	232	3.028	ug/L	0.045	1	21	119947	0
	U	238	0.478	ug/L	0.008	1	3	19241	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:33:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	645469	1
	Be	9	27.666	ug/L	0.170	0	5	55337	0
	C	13		ug/L			58801	83861	1
	Cl	37		ug/L			3025336	3184038	1
>	Sc	45		ug/L			671354	697616	0
	V	51	60.538	ug/L	0.659	1	5156	887489	0
	V-1	51	61.562	ug/L	0.603	0	130	896527	0
	Cr	52	73.167	ug/L	0.297	0	15247	939872	0
	Cr	53	76.545	ug/L	0.768	1	115	109095	1
	Mn	55	1775.803	ug/L	37.565	2	250	30921698	1
	Co	59	33.627	ug/L	0.301	0	40	454613	0
>	Ge	72		ug/L			457613	449956	1
	Ni	60	58.182	ug/L	0.364	0	22	158657	1
	Ni	62	61.318	ug/L	0.359	0	29	23528	1
	Cu	63	48.335	ug/L	0.991	2	58	295965	2
	Cu	65	48.901	ug/L	1.816	3	28	135259	2
	Zn	66	228.669	ug/L	4.171	1	143	372803	0
	Zn	67	248.745	ug/L	4.490	1	23	66093	0
	Zn	68	246.861	ug/L	4.229	1	137	289535	0
	As	75	34.451	ug/L	0.089	0	267	52612	1
	As-1	75	34.846	ug/L	0.662	1	8149	60913	2
	Se	82	77.361	ug/L	1.455	1	-5	12792	0
	Se	78	79.279	ug/L	2.044	2	8278	41365	1
	Mo	98	21.842	ug/L	0.580	2	17	95402	2
	Y	89		ug/L			298590	390645	0
	Kr	83		ug/L			554	764	3
>	In	115		ug/L			979916	929781	0
	Ag	107	21.987	ug/L	0.128	0	15	285138	0
	Cd	111	27.484	ug/L	0.328	1	63	124443	1
	Cd	114	27.276	ug/L	0.263	0	30	307001	0
	Sb	121	1.604	ug/L	0.013	0	102	23137	0
	Sb	123	1.593	ug/L	0.023	1	72	17603	0
	Ba	135	600.886	ug/L	7.185	1	11	2422373	1
	Ba	137	592.539	ug/L	5.461	0	17	4125010	0
>	Tb	159		ug/L			1160798	1089659	0
	Tl	205	26.111	ug/L	0.165	0	51	820217	0
	Pb	208	155.382	ug/L	1.273	0	139	6439407	0
	Bi	209		ug/L			2367270	2127905	0
	Th	232	28.125	ug/L	0.527	1	21	1111662	1
	U	238	26.956	ug/L	0.223	0	3	1083740	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:37:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	664283	2
	Be	9	29.538	ug/L	0.358	1	5	60794	1
	C	13		ug/L			58801	93673	2
	Cl	37		ug/L			3025336	3208810	2
>	Sc	45		ug/L			671354	696608	3
	V	51	57.760	ug/L	1.117	1	5156	845461	1
	V-1	51	58.198	ug/L	1.068	1	130	846019	1
	Cr	52	67.373	ug/L	2.309	3	15247	864844	0
	Cr	53	68.828	ug/L	2.146	3	115	97906	0
	Mn	55	1909.476	ug/L	89.815	4	250	33175034	2
	Co	59	35.805	ug/L	1.809	5	40	482853	1
>	Ge	72		ug/L			457613	453327	1
	Ni	60	57.563	ug/L	1.450	2	22	158108	0
	Ni	62	59.298	ug/L	0.873	1	29	22922	0
	Cu	63	50.597	ug/L	0.729	1	58	312108	0
	Cu	65	51.323	ug/L	1.627	3	28	143023	1
	Zn	66	241.533	ug/L	4.196	1	143	396728	1
	Zn	67	258.923	ug/L	8.397	3	23	69317	3
	Zn	68	256.723	ug/L	5.203	2	137	303346	1
	As	75	37.743	ug/L	0.705	1	267	58039	1
	As-1	75	38.375	ug/L	0.888	2	8149	66759	1
	Se	82	88.120	ug/L	2.422	2	-5	14679	1
	Se	78	90.822	ug/L	2.891	3	8278	46545	1
	Mo	98	22.087	ug/L	0.748	3	17	97189	2
	Y	89		ug/L			298590	389286	1
	Kr	83		ug/L			554	724	5
>	In	115		ug/L			979916	935270	0
	Ag	107	22.990	ug/L	0.689	2	15	299932	3
	Cd	111	30.060	ug/L	0.249	0	63	136902	1
	Cd	114	30.117	ug/L	0.182	0	30	340979	0
	Sb	121	22.882	ug/L	0.472	2	102	330814	2
	Sb	123	22.452	ug/L	0 520	2	72	248751	2
	Ba	135	619.033	ug/L	8.400	1	11	2510292	1
	Ba	137	604.360	ug/L	9.137	1	17	4232093	1
>	Tb	159		ug/L			1160798	1103567	0
	Tl	205	28.747	ug/L	0 701	2	51	914623	2
	Pb	208	166.327	ug/L	2.344	1	139	6980910	0
	Bi	209		ug/L			2367270	2147383	0
	Th	232	31.710	ug/L	0.458	1	21	1269491	1
	U	238	29.697	ug/L	0.471	1	3	1209252	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:41:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	658736	3
	Be	9	1.198	ug/L	0.029	2	5	2448	1
	C	13		ug/L			58801	82676	1
	Cl	37		ug/L			3025336	3128837	2
>	Sc	45		ug/L			671354	710302	1
	V	51	41.498	ug/L	1.214	2	5156	620945	1
	V-1	51	41.904	ug/L	1.352	3	130	621179	1
	Cr	52	29.148	ug/L	0.619	2	15247	390842	0
	Cr	53	30.448	ug/L	1.142	3	115	44239	1
	Mn	55	1741.837	ug/L	40.934	2	250	30878157	1
	Co	59	11.983	ug/L	0.119	0	40	164961	0
>	Ge	72		ug/L			457613	445188	1
	Ni	60	20.428	ug/L	0.273	1	22	55124	0
	Ni	62	21.533	ug/L	0.705	3	29	8191	1
	Cu	63	17.746	ug/L	0.499	2	58	107526	1
	Cu	65	17.873	ug/L	0.604	3	28	48933	2
	Zn	66	221.841	ug/L	2.195	0	143	357893	1
	Zn	67	274.253	ug/L	7.881	2	23	72089	1
	Zn	68	262.775	ug/L	6.703	2	137	304890	0
	As	75	13.448	ug/L	0.274	2	267	20475	1
	As-1	75	13.677	ug/L	0.357	2	8149	28466	0
	Se	82	-0.098	ug/L	0.036	36	-5	-21	28
	Se	78	1.151	ug/L	0.426	37	8278	8529	0
	Mo	98	0.681	ug/L	0.007	0	17	2959	2
	Y	89		ug/L			298590	400439	0
	Kr	83		ug/L			554	783	1
>	In	115		ug/L			979916	909481	1
	Ag	107	0.125	ug/L	0.005	4	15	1595	3
	Cd	111	2.066	ug/L	0.033	1	63	9204	0
	Cd	114	1.957	ug/L	0.011	0	30	21569	1
	Sb	121	0.113	ug/L	0.007	6	102	1684	5
	Sb	123	0.117	ug/L	0.010	8	72	1326	7
	Ba	135	1037.342	ug/L	18.539	1	11	4090096	0
	Ba	137	1027.145	ug/L	23.355	2	17	6994160	2
>	Tb	159		ug/L			1160798	1101185	1
	Tl	205	0.242	ug/L	0.008	3	51	7726	2
	Pb	208	82.938	ug/L	1.271	1	139	3473170	0
	Bi	209		ug/L			2367270	2108586	0
	Th	232	3.804	ug/L	0.070	1	21	151931	0
	U	238	0.450	ug/L	0.013	2	3	18289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:46:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679095	0
	Be	9	0.996	ug/L	0.005	0	5	2101	0
	C	13		ug/L			58801	81604	2
	Cl	37		ug/L			3025336	3152565	1
>	Sc	45		ug/L			671354	720489	1
	V	51	35.318	ug/L	0.386	1	5156	537019	1
	V-1	51	35.408	ug/L	0.490	1	130	532576	1
	Cr	52	27.857	ug/L	0.466	1	15247	379635	0
	Cr	53	28.133	ug/L	0.823	2	115	41477	1
	Mn	55	935.145	ug/L	24.403	2	250	16814823	1
	Co	59	9.378	ug/L	0.169	1	40	130952	0
>	Ge	72		ug/L			457613	454787	1
	Ni	60	25.938	ug/L	1.038	4	22	71474	2
	Ni	62	27.951	ug/L	0.499	1	29	10855	1
	Cu	63	20.965	ug/L	0.543	2	58	129757	1
	Cu	65	21.178	ug/L	0 617	2	28	59230	2
	Zn	66	134.335	ug/L	1.580	1	143	221432	0
	Zn	67	155.238	ug/L	2.024	1	23	41701	0
	Zn	68	147.173	ug/L	2.502	1	137	174517	0
	As	75	9.981	ug/L	0.112	1	267	15593	0
	As-1	75	10.176	ug/L	0.279	2	8149	23709	0
	Se	82	-0.231	ug/L	0.010	4	-5	-43	3
	Se	78	1.015	ug/L	0.616	60	8278	8654	1
	Mo	98	0.323	ug/L	0.022	6	17	1443	5
	Y	89		ug/L			298590	410327	0
	Kr	83		ug/L			554	858	3
>	In	115		ug/L			979916	920415	0
	Ag	107	0.176	ug/L	0.005	2	15	2276	2
	Cd	111	1.202	ug/L	0.026	2	63	5445	1
	Cd	114	1.032	ug/L	0.007	0	30	11525	0
	Sb	121	0.060	ug/L	0.002	3	102	955	2
	Sb	123	0.061	ug/L	0.003	4	72	730	3
	Ba	135	450.552	ug/L	4.820	1	11	1798036	0
	Ba	137	443.254	ug/L	5.175	1	17	3054635	0
>	Tb	159		ug/L			1160798	1091144	0
	Tl	205	0.177	ug/L	0.002	1	51	5604	0
	Pb	208	64.259	ug/L	0.461	0	139	2666772	0
	Bi	209		ug/L			2367270	2150466	0
	Th	232	4.636	ug/L	0.085	1	21	183512	1
	U	238	0.943	ug/L	0.015	1	3	37956	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:50:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669560	1
	Be	9	1.104	ug/L	0.037	3	5	2295	3
	C	13		ug/L			58801	83986	0
	Cl	37		ug/L			3025336	3077675	2
>	Sc	45		ug/L			671354	701312	0
	V	51	35.711	ug/L	0.223	0	5156	528517	0
	V-1	51	35.889	ug/L	0.267	0	130	525497	1
	Cr	52	24.080	ug/L	0.237	0	15247	321637	0
	Cr	53	24.634	ug/L	0.394	1	115	35379	1
	Mn	55	769.488	ug/L	9.718	1	250	13471579	1
	Co	59	9.244	ug/L	0.085	0	40	125661	0
>	Ge	72		ug/L			457613	450092	2
	Ni	60	29.837	ug/L	0.331	1	22	81389	1
	Ni	62	30.947	ug/L	1.270	4	29	11886	2
	Cu	63	24.449	ug/L	0.868	3	58	149705	1
	Cu	65	24.872	ug/L	0.020	0	28	68855	2
	Zn	66	136.839	ug/L	1.935	1	143	223218	1
	Zn	67	156.779	ug/L	3.352	2	23	41673	1
	Zn	68	148.239	ug/L	3.979	2	137	173950	2
	As	75	11.121	ug/L	0.231	2	267	17162	1
	As-1	75	11.368	ug/L	0.306	2	8149	25271	0
	Se	82	-0.242	ug/L	0.053	21	-5	-45	18
	Se	78	1.366	ug/L	0.520	38	8278	8712	0
	Mo	98	0.365	ug/L	0.009	2	17	1609	0
	Y	89		ug/L			298590	471766	2
	Kr	83		ug/L			554	943	4
>	In	115		ug/L			979916	918949	2
	Ag	107	0.213	ug/L	0.007	3	15	2744	0
	Cd	111	1.348	ug/L	0.051	3	63	6083	1
	Cd	114	1.176	ug/L	0.037	3	30	13105	0
	Sb	121	0.072	ug/L	0.003	3	102	1114	1
	Sb	123	0.068	ug/L	0.002	2	72	810	3
	Ba	135	426.385	ug/L	10.242	2	11	1698233	0
	Ba	137	418.457	ug/L	13.953	3	17	2877633	0
>	Tb	159		ug/L			1160798	1091122	1
	Tl	205	0.184	ug/L	0.000	0	51	5831	1
	Pb	208	75.544	ug/L	0.496	0	139	3134968	0
	Bi	209		ug/L			2367270	2115487	1
	Th	232	4.885	ug/L	0.078	1	21	193372	0
	U	238	1.635	ug/L	0.033	2	3	65806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:55:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641685 ✓	1
	Be	9	54.512	ug/L	2.100	3	5	108341	2
	C	13		ug/L			58801	56162	2
	Cl	37		ug/L			3025336	3214467	2
>	Sc	45		ug/L			671354	632166 ✓	1
	V	51	49.710	ug/L	0.261	0	5156	661244	1
	V-1	51	50.166	ug/L	0.458	0	130	662001	1
	Cr	52	49.490	ug/L	0.989	1	15247	580581	0
	Cr	53	50.983	ug/L	2.071	4	115	65847	2
	Mn	55	49.976	ug/L	0.210	0	250	788852	1
	Co	59	50.644	ug/L	1.932	3	40	620117	1
>	Ge	72		ug/L			457613	461866 ✓	1
	Ni	60	48.895	ug/L	1.551	3	22	136836	1
	Ni	62	48.774	ug/L	0.969	1	29	19215	1
	Cu	63	48.836	ug/L	0.554	1	58	306939	0
	Cu	65	48.413	ug/L	1.406	2	28	137469	1
	Zn	66	47.973	ug/L	1.152	2	143	80394	1
	Zn	67	50.183	ug/L	0.804	1	23	13706	0
	Zn	68	49.406	ug/L	0 573	1	137	59595	0
	As	75	48.756	ug/L	0.776	1	267	76307	0
	As-1	75	48.904	ug/L	0 779	1	8149	84424	0
	Se	82	49.294	ug/L	1.118	2	-5	8364	1
	Se	78	49.733	ug/L	1.217	2	8278	29750	0
	Mo	98	45.466	ug/L	0.456	1	17	203844	0
	Y	89		ug/L			298590	299481	0
	Kr	83		ug/L			554	527	2
>	In	115		ug/L			979916	915111 ✓	0
	Ag	107	45.975	ug/L	0.468	1	15	586791	0
	Cd	111	50.233	ug/L	0.563	1	63	223804	1
	Cd	114	50.026	ug/L	0.450	0	30	554183	1
	Sb	121	49.846	ug/L	0.359	0	102	704965	0
	Sb	123	49.501	ug/L	0.417	0	72	536533	1
	Ba	135	49.533	ug/L	1.026	2	11	196558	2
	Ba	137	49.666	ug/L	0.337	0	17	340329	1
>	Tb	159		ug/L			1160798	1036888 ✓	0
	Tl	205	51.651	ug/L	0.439	0	51	1543867	0
	Pb	208	50.984	ug/L	0.249	0	139	2010693	0
	Bi	209		ug/L			2367270	2144029	0
	Th	232	51.869	ug/L	0.105	0	21	1951035	0
	U	238	53.450	ug/L	0.641	1	3	2044835	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:02:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	624890	1
	Be	9	0.001	ug/L	0.000	24	5	7	7
	C	13		ug/L			58801	58264	3
	Cl	37		ug/L			3025336	3091372	1
>	Sc	45		ug/L			671354	620879	1
	V	51	0.036	ug/L	0.009	24	5156	5231	2
	V-1	51	0.002	ug/L	0.001	73	130	145	12
	Cr	52	0.121	ug/L	0.027	22	15247	15462	1
	Cr	53	0.011	ug/L	0.012	110	115	120	11
	Mn	55	0.007	ug/L	0.003	38	250	347	13
	Co	59	0.001	ug/L	0.000	9	40	53	2
>	Ge	72		ug/L			457613	442099	0
	Ni	60	-0.001	ug/L	0.002	264	22	20	19
	Ni	62	0.053	ug/L	0.012	22	29	48	9
	Cu	63	0.005	ug/L	0.001	28	58	84	9
	Cu	65	0.001	ug/L	0.002	185	28	31	21
	Zn	66	-0.004	ug/L	0.004	115	143	132	4
	Zn	67	0.001	ug/L	0.004	685	23	23	4
	Zn	68	0.010	ug/L	0.005	49	137	143	3
	As	75	-0.010	ug/L	0.012	121	267	244	6
	As-1	75	0.401	ug/L	0.069	17	8149	8470	0
	Se	82	0.022	ug/L	0.007	32	-5	-1	75
	Se	78	1.493	ug/L	0.240	16	8278	8612	0
	Mo	98	0.006	ug/L	0.001	25	17	41	15
	Y	89		ug/L			298590	280031	0
	Kr	83		ug/L			554	529	2
>	In	115		ug/L			979916	897436	0
	Ag	107	0.002	ug/L	0.000	8	15	33	4
	Cd	111	0.002	ug/L	0.000	27	63	65	3
	Cd	114	0.001	ug/L	0.001	91	30	35	19
	Sb	121	0.050	ug/L	0.002	4	102	783	4
	Sb	123	0.050	ug/L	0.004	7	72	593	6
	Ba	135	0.003	ug/L	0.003	105	11	21	51
	Ba	137	0.003	ug/L	0.000	16	17	33	9
>	Tb	159		ug/L			1160798	990519	0
	Tl	205	0.009	ug/L	0.004	44	51	292	38
	Pb	208	0.002	ug/L	0.001	26	139	190	10
	Bi	209		ug/L			2367270	2129554	0
	Th	232	0.093	ug/L	0.005	5	21	3364	4
	U	238	0.001	ug/L	0.000	8	3	54	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			726304	632346	0
	Be	9	0.002	ug/L	0.001	54	5	8	24
	C	13		ug/L			58801	59327	3
	Cl	37		ug/L			3025336	3058708	0
>	Sc	45		ug/L			671354	628473	0
	V	51	0.032	ug/L	0.006	18	5156	5246	1
	V-1	51	0.003	ug/L	0.000	9	130	163	2
	Cr	52	0.116	ug/L	0.013	11	15247	15588	1
	Cr	53	0.022	ug/L	0.007	32	115	136	6
	Mn	55	0.021	ug/L	0.002	11	250	569	6
	Co	59	0.004	ug/L	0.000	10	40	92	6
>	Ge	72		ug/L			457613	443392	1
	Ni	60	0.003	ug/L	0.001	44	22	29	11
	Ni	62	0.010	ug/L	0.014	136	29	32	15
	Cu	63	0.052	ug/L	0.001	1	58	369	1
	Cu	65	0.043	ug/L	0.004	9	28	145	7
	Zn	66	0.236	ug/L	0.013	5	143	516	3
	Zn	67	0.194	ug/L	0.070	36	23	73	25
	Zn	68	0.224	ug/L	0.009	3	137	391	1
	As	75	-0.001	ug/L	0.022	2450	267	258	13
	As-1	75	0.451	ug/L	0.089	19	8149	8569	0
	Se	82	0.044	ug/L	0.075	169	-5	2	585
	Se	78	1.676	ug/L	0.328	19	8278	8712	0
	Mo	98	0.002	ug/L	0.002	86	17	27	34
	Y	89		ug/L			298590	287646	1
	Kr	83		ug/L			554	537	4
>	In	115		ug/L			979916	904024	2
	Ag	107	0.001	ug/L	0.000	38	15	21	11
	Cd	111	-0.001	ug/L	0.003	380	63	55	22
	Cd	114	0.001	ug/L	0.000	52	30	36	11
	Sb	121	0.013	ug/L	0.001	7	102	273	6
	Sb	123	0.013	ug/L	0.001	3	72	211	4
	Ba	135	0.006	ug/L	0.001	17	11	33	13
	Ba	137	0.008	ug/L	0.001	14	17	70	9
>	Tb	159		ug/L			1160798	987765	1
	Tl	205	0.005	ug/L	0.002	42	51	192	33
	Pb	208	0.004	ug/L	0.001	14	139	277	7
	Bi	209		ug/L			2367270	2121511	0
	Th	232	0.071	ug/L	0.011	15	21	2552	14
	U	238	0.001	ug/L	0.000	40	3	32	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	633675	0
	Be	9	27.347	ug/L	0.580	2	5	53700	2
	C	13		ug/L			58801	58399	3
	Cl	37		ug/L			3025336	3046858	0
>	Sc	45		ug/L			671354	625792	1
	V	51	25.834	ug/L	1.196	4	5156	342320	2
	V-1	51	26.178	ug/L	1.242	4	130	341878	3
	Cr	52	25.526	ug/L	0.437	1	15247	303332	0
	Cr	53	26.650	ug/L	0.601	2	115	34135	0
	Mn	55	25.752	ug/L	0.536	2	250	402478	2
	Co	59	26.502	ug/L	0.590	2	40	321339	0
>	Ge	72		ug/L			457613	454838	1
	Ni	60	25.378	ug/L	0.177	0	22	69966	0
	Ni	62	25.615	ug/L	0.566	2	29	9951	1
	Cu	63	25.734	ug/L	0.347	1	58	159320	1
	Cu	65	26.423	ug/L	0.159	0	28	73918	1
	Zn	66	81.468	ug/L	1.642	2	143	134365	1
	Zn	67	77.955	ug/L	0.044	0	23	20957	1
	Zn	68	79.266	ug/L	1.935	2	137	94068	1
	As	75	24.970	ug/L	0.384	1	267	38617	0
	As-1	75	25.380	ug/L	0.404	1	8149	47044	0
	Se	82	79.475	ug/L	0.449	0	-5	13286	0
	Se	78	81.014	ug/L	0.512	0	8278	42554	0
	Mo	98	22.523	ug/L	0.489	2	17	99443	1
	Y	89		ug/L			298590	289499	1
	Kr	83		ug/L			554	521	10
>	In	115		ug/L			979916	902731	0
	Ag	107	24.334	ug/L	0.524	2	15	306427	2
	Cd	111	25.424	ug/L	0.279	1	63	111769	1
	Cd	114	25.655	ug/L	0.313	1	30	280372	1
	Sb	121	25.374	ug/L	0.154	0	102	354054	1
	Sb	123	25.003	ug/L	0.052	0	72	267363	0
	Ba	135	25.791	ug/L	0.320	1	11	100963	1
	Ba	137	25.408	ug/L	0.143	0	17	171756	1
>	Tb	159		ug/L			1160798	1014593	1
	Tl	205	27.280	ug/L	0.461	1	51	797777	1
	Pb	208	26.986	ug/L	0.351	1	139	1041285	0
	Bi	209		ug/L			2367270	2144969	0
	Th	232	26.942	ug/L	0.691	2	21	991397	1
	U	238	27.195	ug/L	0.664	2	3	1017758	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	680889	0
	Be	9	1.296	ug/L	0.011	0	5	2740	0
	C	13		ug/L			58801	75830	1
	Cl	37		ug/L			3025336	3113816	1
>	Sc	45		ug/L			671354	740699 ✓	2
	V	51	40.768	ug/L	1.728	4	5156	635966	1
	V-1	51	41.120	ug/L	1.756	4	130	635392	1
	Cr	52	34.202	ug/L	0.608	1	15247	475304	1
	Cr	53	35.335	ug/L	0.543	1	115	53525	1
	Mn	55	403.174	ug/L	9.834	2	250	7451571	0
	Co	59	9.888	ug/L	0.333	3	40	141893	1
>	Ge	72		ug/L			457613	461505	1
	Ni	60	29.143	ug/L	0.561	1	22	81520	1
	Ni	62	31.577	ug/L	0.806	2	29	12441	2
	Cu	63	28.271	ug/L	0.247	0	58	177580	0
	Cu	65	29.107	ug/L	0.772	2	28	82604	1
	Zn	66	108.641	ug/L	5.015	4	143	181716	3
	Zn	67	132.371	ug/L	3.045	2	23	36091	2
	Zn	68	121.297	ug/L	1.737	1	137	145995	0
	As	75	8.969	ug/L	0.188	2	267	14246	1
	As-1	75	9.091	ug/L	0.258	2	8149	22372	0
	Se	82	↳0.462	ug/L	0.133	28	-5	-83	25
	Se	78	0.987	ug/L	0.191	19	8278	8773	0
	Mo	98	0.336	ug/L	0.010	2	17	1520	3
	Y	89		ug/L			298590	561426	1
	Kr	83		ug/L			554	1122	2
>	In	115		ug/L			979916	909998	0
	Ag	107	0.265	ug/L	0.004	1	15	3378	2
	Cd	111	0.662	ug/L	0.027	4	63	2990	3
	Cd	114	0.355	ug/L	0.015	4	30	3938	3
	Sb	121	↳ 0.051	ug/L	0.004	8	102	814	7
	Sb	123	0.050	ug/L	0.005	9	72	606	7
	Ba	135	413.310	ug/L	2.943	0	11	1630821	1
	Ba	137	405.032	ug/L	4.058	1	17	2759699	0
>	Tb	159		ug/L			1160798	1101527	0
	Tl	205	↳ 0.152	ug/L	0.003	1	51	4866	1
	Pb	208	26.132	ug/L	0.041	0	139	1094903	0
	Bi	209		ug/L			2367270	2111347	1
	Th	232	5.715	ug/L	0.075	1	21	228403	1
	U	238	2.296	ug/L	0.018	0	3	93333	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	700795	1
	Be	9	1.299	ug/L	0.064	4	5	2824	4
	C	13		ug/L			58801	75246	3
	Cl	37		ug/L			3025336	3124450	0
>	Sc	45		ug/L			671354	740487	0
	V	51	40.627	ug/L	1.321	3	5156	634159	3
	V-1	51	40.838	ug/L	1.241	3	130	631411	3
	Cr	52	28.061	ug/L	0.122	0	15247	392974	0
	Cr	53	28.721	ug/L	0.468	1	115	43527	1
	Mn	55	592.016	ug/L	9.529	1	250	10943361	1
	Co	59	10.007	ug/L	0.350	3	40	143619	2
>	Ge	72		ug/L			457613	459196	0
	Ni	60	32.873	ug/L	0.439	1	22	91491	0
	Ni	62	33.926	ug/L	0.914	2	29	13298	2
	Cu	63	32.769	ug/L	1.195	3	58	204780	3
	Cu	65	33.291	ug/L	0.417	1	28	94011	0
	Zn	66	104.639	ug/L	2.018	1	143	174196	1
	Zn	67	127.613	ug/L	3.738	2	23	34619	2
	Zn	68	117.250	ug/L	2.204	1	137	140446	2
	As	75	9.680	ug/L	0.140	1	267	15278	0
	As-1	75	9.811	ug/L	0.133	1	8149	23376	0
	Se	82	ν -0.368	ug/L	0.112	30	-5	-67	28
	Se	78	1.121	ug/L	0.249	22	8278	8786	1
	Mo	98	0.350	ug/L	0.008	2	17	1578	2
	Y	89		ug/L			298590	617372	1
	Kr	83		ug/L			554	1123	3
>	In	115		ug/L			979916	920435	1
	Ag	107	0.382	ug/L	0.005	1	15	4921	2
	Cd	111	0.708	ug/L	0.015	2	63	3230	1
	Cd	114	0.400	ug/L	0.006	1	30	4483	0
	Sb	121	ν 0.028	ug/L	0.002	6	102	499	5
	Sb	123	0.030	ug/L	0.002	5	72	399	3
	Ba	135	376.487	ug/L	6.978	1	11	1502270	0
	Ba	137	371.381	ug/L	3.288	0	17	2559267	0
>	Tb	159		ug/L			1160798	1096597	1
	Tl	205	ν 0.171	ug/L	0.003	1	51	5451	1
	Pb	208	21.163	ug/L	0.422	1	139	882616	0
	Bi	209		ug/L			2367270	2087434	0
	Th	232	6.090	ug/L	0.086	1	21	242250	0
	U	238	2.787	ug/L	0.040	1	3	112736	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:24:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rv Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	708238	0
	Be	9	1.202	ug/L	0.007	0	5	2644	0
	C	13		ug/L			58801	75490	0
	Cl	37		ug/L			3025336	3186111	3
>	Sc	45		ug/L			671354	761476	1
	V	51	36.439	ug/L	0.375	1	5156	585470	1
	V-1	51	36.671	ug/L	0.432	1	130	583031	2
	Cr	52	27.660	ug/L	0.533	1	15247	398537	0
	Cr	53	28.397	ug/L	0.581	2	115	44254	1
	Mn	55	393.048	ug/L	6.334	1	250	7470745	0
	Co	59	9.034	ug/L	0.164	1	40	133323	0
>	Ge	72		ug/L			457613	468129	2
	Ni	60	25.476	ug/L	0.559	2	22	72264	0
	Ni	62	27.265	ug/L	0 398	1	29	10899	1
	Cu	63	34.274	ug/L	1.207	3	58	218229	0
	Cu	65	34.660	ug/L	1.404	4	28	99712	1
	Zn	66	94.778	ug/L	3.819	4	143	160756	1
	Zn	67	114.160	ug/L	3.111	2	23	31566	2
	Zn	68	102.095	ug/L	3.304	3	137	124611	1
	As	75	7.682	ug/L	0.178	2	267	12415	1
	As-1	75	7.808	ug/L	0.342	4	8149	20659	0
	Se	82	-0.403	ug/L	0.077	19	-5	-74	18
	Se	78	1.061	ug/L	0.717	67	8278	8925	0
	Mo	98	0.256	ug/L	0.015	5	17	1178	2
	Y	89		ug/L			298590	686201	0
	Kr	83		ug/L			554	1138	4
>	In	115		ug/L			979916	915309	0
	Ag	107	0.636	ug/L	0.012	1	15	8134	1
	Cd	111	0.580	ug/L	0.042	7	63	2641	7
	Cd	114	0.270	ug/L	0.001	0	30	3019	1
	Sb	121	0.019	ug/L	0.003	16	102	363	11
	Sb	123	0.019	ug/L	0.003	14	72	274	10
	Ba	135	287.199	ug/L	1.237	0	11	1139823	1
	Ba	137	285.348	ug/L	3.697	1	17	1955464	0
>	Tb	159		ug/L			1160798	1107662	1
	Tl	205	0.163	ug/L	0.002	0	51	5243	1
	Pb	208	17.874	ug/L	0.139	0	139	753104	0
	Bi	209		ug/L			2367270	2087267	1
	Th	232	5.707	ug/L	0.083	1	21	229309	0
	U	238	3.097	ug/L	0.083	2	3	126574	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:

rr bc

Sample Date/Time: Thursday, November 15, 2012 17:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	672119	1
	Be	9	**0.931**	ug/L	0.032	3	5	1944	4
	C	13		ug/L			58801	77697	1
	Cl	37		ug/L			3025336	3157728	1
>	Sc	45		ug/L			671354	693465	1
	V	51	**32.303**	ug/L	0.797	2	5156	473161	1
	V-1	51	**32.381**	ug/L	0.971	2	130	468746	2
	Cr	52	**21.791**	ug/L	0.178	0	15247	289321	1
	Cr	53	**22.022**	ug/L	0.506	2	115	31281	1
	Mn	55	**842.080**	ug/L	17.824	2	250	14575171	1
	Co	59	**8.061**	ug/L	0.207	2	40	108337	1
>	Ge	72		ug/L			457613	455755	2
	Ni	60	**23.433**	ug/L	0.621	2	22	64706	0
	Ni	62	**24.856**	ug/L	0.365	1	29	9675	1
	Cu	63	**14.977**	ug/L	0.613	4	58	92873	2
	Cu	65	**15.188**	ug/L	0.674	4	28	42552	2
	Zn	66	**146.813**	ug/L	4.157	2	143	242401	0
	Zn	67	**170.687**	ug/L	5.126	3	23	45925	0
	Zn	68	**162.640**	ug/L	4.463	2	137	193186	0
	As	75	**9.413**	ug/L	0.307	3	267	14745	0
	As-1	75	**9.691**	ug/L	0.394	4	8149	23006	0
	Se	82	**-0.334**	ug/L	0.102	30	-5	-61	30
	Se	78	**1.228**	ug/L	0.379	30	8278	8763	1
	Mo	98	**0.345**	ug/L	0.016	4	17	1540	2
	Y	89		ug/L			298590	386526	2
	Kr	83		ug/L			554	869	6
>	In	115		ug/L			979916	923177	1
	Ag	107	**0.197**	ug/L	0.013	6	15	2547	4
	Cd	111	**1.167**	ug/L	0.009	0	63	5301	0
	Cd	114	**1.012**	ug/L	0.018	1	30	11336	0
	Sb	121	**0.049**	ug/L	0.002	4	102	790	2
	Sb	123	**0.048**	ug/L	0.003	6	72	588	5
	Ba	135	**489.296**	ug/L	11.355	2	11	1958089	0
	Ba	137	**471.117**	ug/L	8.931	1	17	3255918	0
>	Tb	159		ug/L			1160798	1065791	0
	Tl	205	**0.139**	ug/L	0.001	0	51	4304	1
	Pb	208	**37.625**	ug/L	0.292	0	139	1525218	0
	Bi	209		ug/L			2367270	2113366	0
	Th	232	**4.344**	ug/L	0.003	0	21	167958	1
	U	238	**0.637**	ug/L	0.002	0	3	25070	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments: rr Be
Sample Date/Time: Thursday, November 15, 2012 17:32:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	671473	3
	Be	9	0.843	ug/L	0.038	4	5	1757	1
	C	13		ug/L			58801	86867	0
	Cl	37		ug/L			3025336	3140166	1
>	Sc	45		ug/L			671354	694730	1
	V	51	32.021	ug/L	0.905	2	5156	470037	3
	V-1	51	32.226	ug/L	0.802	2	130	467476	3
	Cr	52	22.986	ug/L	0.414	1	15247	304821	0
	Cr	53	23.633	ug/L	0.242	1	115	33625	1
	Mn	55	1029.036	ug/L	28.522	2	250	17842112	1
	Co	59	8.138	ug/L	0.093	1	40	109582	0
>	Ge	72		ug/L			457613	456056	1
	Ni	60	19.485	ug/L	0.386	1	22	53878	2
	Ni	62	20.857	ug/L	0.399	1	29	8130	1
	Cu	63	19.133	ug/L	0.265	1	58	118775	0
	Cu	65	19.664	ug/L	0.518	2	28	55155	1
	Zn	66	124.248	ug/L	1.230	0	143	205396	0
	Zn	67	137.455	ug/L	2.581	1	23	37034	2
	Zn	68	132.929	ug/L	0.967	0	137	158103	0
	As	75	16.518	ug/L	0.204	1	267	25704	0
	As-1	75	16.805	ug/L	0.211	1	8149	33977	0
	Se	82	-0.045	ug/L	0.060	133	-5	-12	78
	Se	78	1.270	ug/L	0.069	5	8278	8789	0
	Mo	98	0.451	ug/L	0.022	4	17	2014	3
	Y	89		ug/L			298590	392096	0
	Kr	83		ug/L			554	730	2
>	In	115		ug/L			979916	931241	1
	Ag	107	0.093	ug/L	0.001	1	15	1219	1
	Cd	111	1.679	ug/L	0.023	1	63	7669	0
	Cd	114	1.608	ug/L	0.026	1	30	18149	1
	Sb	121	0.080	ug/L	0.003	4	102	1250	3
	Sb	123	0.082	ug/L	0.001	1	72	975	0
	Ba	135	277.351	ug/L	1.315	0	11	1119821	1
	Ba	137	277.746	ug/L	4.533	1	17	1936313	0
>	Tb	159		ug/L			1160798	1083148	1
	Tl	205	0.160	ug/L	0.005	3	51	5038	3
	Pb	208	70.984	ug/L	1.056	1	139	2923951	0
	Bi	209		ug/L			2367270	2126716	0
	Th	232	4.078	ug/L	0.043	1	21	160235	0
	U	238	0.771	ug/L	0.005	0	3	30806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	694379	0
	Be	9	0.751	ug/L	0 033	4	5	1620	3
	C	13		ug/L			58801	79704	1
	Cl	37		ug/L			3025336	3116892	1
>	Sc	45		ug/L			671354	701369	1
	V	51	27.606	ug/L	0.484	1	5156	409771	1
	V-1	51	27.572	ug/L	0.352	1	130	403749	0
	Cr	52	22.339	ug/L	0.214	0	15247	299539	0
	Cr	53	22.216	ug/L	0.271	1	115	31922	2
	Mn	55	1610.403	ug/L	40.654	2	250	28194174	2
	Co	59	8.784	ug/L	0.167	1	40	119427	2
>	Ge	72		ug/L			457613	461954	2
	Ni	60	24.177	ug/L	0.955	3	22	67666	1
	Ni	62	25.807	ug/L	0.637	2	29	10181	0
	Cu	63	16.297	ug/L	0.360	2	58	102464	0
	Cu	65	16.633	ug/L	0.360	2	28	47256	0
	Zn	66	131.048	ug/L	2.974	2	143	219400	1
	Zn	67	139.946	ug/L	2.376	1	23	38184	0
	Zn	68	135.161	ug/L	5.380	3	137	162755	2
	As	75	20.708	ug/L	0.772	3	267	32561	1
	As-1	75	20.912	ug/L	0 866	4	8149	40802	1
	Se	82	-0.135	ug/L	0.063	46	-5	-28	36
	Se	78	0.924	ug/L	0.366	39	8278	8752	0
	Mo	98	0.382	ug/L	0.007	1	17	1730	1
	Y	89		ug/L			298590	383834	1
	Kr	83		ug/L			554	773	2
>	In	115		ug/L			979916	933212	0
	Ag	107	0.124	ug/L	0.003	2	15	1633	1
	Cd	111	1.604	ug/L	0.050	3	63	7344	3
	Cd	114	1.524	ug/L	0.019	1	30	17245	1
	Sb	121	0.098	ug/L	0.004	4	102	1511	3
	Sb	123	0.101	ug/L	0.003	2	72	1184	3
	Ba	135	273.149	ug/L	4.551	1	11	1105199	1
	Ba	137	270.730	ug/L	4.598	1	17	1891580	1
>	Tb	159		ug/L			1160798	1075202	0
	Tl	205	0.197	ug/L	0.004	2	51	6155	1
	Pb	208	87.323	ug/L	0.925	1	139	3570933	0
	Bi	209		ug/L			2367270	2155438	2
	Th	232	4.326	ug/L	0.025	0	21	168766	1
	U	238	0.533	ug/L	0.003	0	3	21133	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:41:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			726304	670867	2
	Be	9	0.738	ug/L	0.012	1	5	1540	2
	C	13		ug/L			58801	79897	1
	Cl	37		ug/L			3025336	3116504	1
>	Sc	45		ug/L			671354	679830	1
	V	51	26.498	ug/L	0.881	3	5156	381349	1
	V-1	51	26.510	ug/L	0.807	3	130	376173	1
	Cr	52	18.562	ug/L	0.849	4	15247	243759	2
	Cr	53	18.583	ug/L	0.614	3	115	25889	1
	Mn	55	958.176	ug/L	37.090	3	250	16253319	2
	Co	59	6.810	ug/L	0.176	2	40	89721	0
>	Ge	72		ug/L			457613	458129	1
	Ni	60	18.894	ug/L	0.523	2	22	52467	1
	Ni	62	20.510	ug/L	0.126	0	29	8033	1
	Cu	63	15.229	ug/L	0.111	0	58	94983	0
	Cu	65	15.195	ug/L	0.210	1	28	42824	0
	Zn	66	143.187	ug/L	2.413	1	143	237746	0
	Zn	67	147.734	ug/L	2.713	1	23	39978	0
	Zn	68	143.250	ug/L	2 043	1	137	171145	1
	As	75	12.043	ug/L	0.209	1	267	18898	0
	As-1	75	12.266	ug/L	0.268	2	8149	27115	0
	Se	82	-0.050	ug/L	0.042	83	-5	-13	51
	Se	78	0.991	ug/L	0.252	25	8278	8710	0
	Mo	98	0.462	ug/L	0.015	3	17	2071	3
	Y	89		ug/L			298590	383395	1
	Kr	83		ug/L			554	704	0
>	In	115		ug/L			979916	915967	0
	Ag	107	0.167	ug/L	0.004	2	15	2144	2
	Cd	111	1.604	ug/L	0.027	1	63	7211	2
	Cd	114	1.464	ug/L	0.022	1	30	16260	1
	Sb	121	0.097	ug/L	0.002	2	102	1466	1
	Sb	123	0.097	ug/L	0.004	4	72	1115	3
	Ba	135	206.064	ug/L	2.171	1	11	818418	1
	Ba	137	204.119	ug/L	1.458	0	17	1399955	1
>	Tb	159		ug/L			1160798	1068230	1
	Tl	205	0.157	ug/L	0.003	2	51	4870	0
	Pb	208	63.303	ug/L	1.438	2	139	2571448	0
	Bi	209		ug/L			2367270	2124075	1
	Th	232	4.069	ug/L	0.050	1	21	157697	0
	U	238	1.456	ug/L	0.043	2	3	57384	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:45:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	660319	1
	Be	**9**	**0.716**	ug/L	0.017	2	5	1468	1
	C	**13**		ug/L			58801	88005	0
	Cl	**37**		ug/L			3025336	3087078	1
>	**Sc**	**45**		ug/L			671354	689069	1
	V	**51**	**22.560**	ug/L	0.653	2	5156	330014	3
	V-1	**51**	**22.581**	ug/L	0.587	2	130	324907	2
	Cr	**52**	**14.376**	ug/L	0.180	1	15247	194971	1
	Cr	**53**	**14.425**	ug/L	0.630	4	115	20398	3
	Mn	**55**	**1281.819**	ug/L	61.348	4	250	22041800	3
	Co	**59**	**5.869**	ug/L	0.124	2	40	78400	1
>	**Ge**	**72**		ug/L			457613	458567	0
	Ni	**60**	**12.877**	ug/L	0.231	1	22	35802	0
	Ni	**62**	**14.204**	ug/L	0.259	1	29	5577	2
	Cu	**63**	**13.976**	ug/L	0.209	1	58	87260	1
	Cu	**65**	**14.244**	ug/L	0.332	2	28	40180	1
	Zn	**66**	**146.951**	ug/L	2.181	1	143	244235	0
	Zn	**67**	**161.885**	ug/L	4.186	2	23	43848	2
	Zn	**68**	**160.306**	ug/L	1.892	1	137	191684	0
	As	**75**	**10.226**	ug/L	0.187	1	267	16103	1
	As-1	**75**	**10.489**	ug/L	0.231	2	8149	24393	0
	Se	**82**	**~0.098**	ug/L	0.040	40	-5	11	60
	Se	**78**	**1.156**	ug/L	0.214	18	8278	8789	0
	Mo	**98**	**0.245**	ug/L	0.002	0	17	1106	0
	Y	**89**		ug/L			298590	386451	1
	Kr	**83**		ug/L			554	631	2
>	**In**	**115**		ug/L			979916	929731	1
	Ag	**107**	**U 0.076**	ug/L	0.003	3	15	1004	4
	Cd	**111**	**1.949**	ug/L	0.018	0	63	8879	0
	Cd	**114**	**1.914**	ug/L	0.009	0	30	21572	0
	Sb	**121**	**U 0.159**	ug/L	0.001	0	102	2374	0
	Sb	**123**	**0.159**	ug/L	0.006	3	72	1816	4
	Ba	**135**	**402.337**	ug/L	6.590	1	11	1621745	0
	Ba	**137**	**392.873**	ug/L	2.875	0	17	2734942	1
>	**Tb**	**159**		ug/L			1160798	1071071	0
	Tl	**205**	**U 0.169**	ug/L	0.004	2	51	5267	2
	Pb	**208**	**80.066**	ug/L	1.147	1	139	3261789	1
	Bi	**209**		ug/L			2367270	2139069	0
	Th	**232**	**3.880**	ug/L	0.017	0	21	150777	0
	U	**238**	**0.816**	ug/L	0.006	0	3	32234	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:50:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	630489	2
	Be	9	55.409	ug/L	2.659	4	5	108178	2
	C	13		ug/L			58801	56806	2
	Cl	37		ug/L			3025336	3107422	2
>	Sc	45		ug/L			671354	636488	2
	V	51	50.167	ug/L	1.179	2	5156	671704	1
	V-1	51	50.537	ug/L	1.446	2	130	671321	1
	Cr	52	49.571	ug/L	0.854	1	15247	585565	1
	Cr	53	50.780	ug/L	1.486	2	115	66046	1
	Mn	55	50.043	ug/L	1.042	2	250	795117	0
	Co	59	50.727	ug/L	1.022	2	40	625522	0
>	Ge	72		ug/L			457613	459912	2
	Ni	60	48.098	ug/L	3.142	6	22	133953	4
	Ni	62	48.361	ug/L	0.890	1	29	18973	2
	Cu	63	48.371	ug/L	1.746	3	58	302613	1
	Cu	65	48.398	ug/L	1.546	3	28	136817	1
	Zn	66	48.938	ug/L	1.314	2	143	81652	1
	Zn	67	50.299	ug/L	0.751	1	23	13679	0
	Zn	68	49.441	ug/L	1 120	2	137	59372	0
	As	75	48.536	ug/L	1.180	2	267	75627	0
	As-1	75	48.938	ug/L	1.371	2	8149	84100	0
	Se	82	49.238	ug/L	0.882	1	-5	8319	0
	Se	78	50.574	ug/L	1.465	2	8278	29979	0
	Mo	98	44.653	ug/L	1.521	3	17	199314	2
	Y	89		ug/L			298590	294878	1
	Kr	83		ug/L			554	514	4
>	In	115		ug/L			979916	897000	1
	Ag	107	45.764	ug/L	1.181	2	15	572511	2
	Cd	111	50.813	ug/L	0.367	0	63	221917	1
	Cd	114	51.319	ug/L	0.263	0	30	557214	0
	Sb	121	50.554	ug/L	0.771	1	102	700774	0
	Sb	123	50.626	ug/L	0.466	0	72	537823	0
	Ba	135	50.130	ug/L	0.290	0	11	194968	0
	Ba	137	49.652	ug/L	0.382	0	17	333490	1
>	Tb	159		ug/L			1160798	1008137	0
	Tl	205	52.166	ug/L	0.690	1	51	1515994	1
	Pb	208	51.438	ug/L	0.232	0	139	1972384	0
	Bi	209		ug/L			2367270	2078769	1
	Th	232	52.422	ug/L	0.200	0	21	1917120	0
	U	238	53.884	ug/L	0.653	1	3	2004301	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	625174 ✓	1
	Be	9	-0.000	ug/L	0.001	948	5	4	44
	C	13		ug/L			58801	57806	0
	Cl	37		ug/L			3025336	3032251	0
>	Sc	45		ug/L			671354	603951 ✓	1
	V	51	0.037	ug/L	0.010	26	5156	5100	2
	V-1	51	-0.000	ug/L	0.001	19207	130	117	9
	Cr	52	0.125	ug/L	0.026	20	15247	15083	2
	Cr	53	0.005	ug/L	0.006	121	115	110	8
	Mn	55	0.011	ug/L	0.005	47	250	396	18
	Co	59	0.002	ug/L	0.001	46	40	60	17
>	Ge	72		ug/L			457613	436976 ✓	1
	Ni	60	-0.001	ug/L	0.001	119	22	19	12
	Ni	62	0.061	ug/L	0.032	52	29	51	22
	Cu	63	0.005	ug/L	0.002	42	58	83	14
	Cu	65	0.003	ug/L	0.001	34	28	34	8
	Zn	66	-0.007	ug/L	0.012	184	143	126	16
	Zn	67	0.015	ug/L	0.024	164	23	26	22
	Zn	68	0.007	ug/L	0.003	41	137	138	3
	As	75	0.004	ug/L	0.004	93	267	261	3
	As-1	75	0.511	ug/L	0.067	13	8149	8534	1
	Se	82	0.027	ug/L	0.020	74	-5	0	408
	Se	78	1.836	ug/L	0.246	13	8278	8652	1
	Mo	98	0.006	ug/L	0.001	22	17	43	14
	Y	89		ug/L			298590	275379	1
	Kr	83		ug/L			554	518	1
>	In	115		ug/L			979916	872475 ✓	1
	Ag	107	0.001	ug/L	0.000	24	15	27	11
	Cd	111	0.003	ug/L	0.001	34	63	69	5
	Cd	114	0.001	ug/L	0.001	105	30	39	34
	Sb	121	0.053	ug/L	0.002	4	102	807	5
	Sb	123	0.054	ug/L	0.002	4	72	618	5
	Ba	135	0.003	ug/L	0.002	62	11	22	32
	Ba	137	0.003	ug/L	0.000	13	17	37	6
>	Tb	159		ug/L			1160798	958815 ✓	0
	Tl	205	0.010	ug/L	0.004	43	51	316	38
	Pb	208	0.002	ug/L	0.001	33	139	189	12
	Bi	209		ug/L			2367270	2055581	0
	Th	232	0.093	ug/L	0 005	5	21	3244	4
	U	238	0.001	ug/L	0.000	26	3	53	23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:02:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				617808	1
	Be	9		ug/L				9	77
	C	13		ug/L				57054	3
	Cl	37		ug/L				3021538	0
>	Sc	45		ug/L				603049	0
	V	51		ug/L				5204	0
	V-1	51		ug/L				161	45
	Cr	52		ug/L				15338	1
	Cr	53		ug/L				120	12
	Mn	55		ug/L				851	107
	Co	59		ug/L				76	21
>	Ge	72		ug/L				436831	1
	Ni	60		ug/L				19	53
	Ni	62		ug/L				34	17
	Cu	63		ug/L				79	18
	Cu	65		ug/L				33	8
	Zn	66		ug/L				137	18
	Zn	67		ug/L				26	15
	Zn	68		ug/L				127	12
	As	75		ug/L				255	5
	As-1	75		ug/L				8509	0
	Se	82		ug/L				6	162
	Se	78		ug/L				8644	0
	Mo	98		ug/L				14	60
	Y	89		ug/L				278872	2
	Kr	83		ug/L				509	5
>	In	115		ug/L				878990	1
	Ag	107		ug/L				24	70
	Cd	111		ug/L				66	14
	Cd	114		ug/L				45	35
	Sb	121		ug/L				270	12
	Sb	123		ug/L				194	7
	Ba	135		ug/L				45	122
	Ba	137		ug/L				76	120
>	Tb	159		ug/L				958896	1
	Tl	205		ug/L				228	44
	Pb	208		ug/L				272	74
	Bi	209		ug/L				2065247	0
	Th	232		ug/L				1210	4
	U	238		ug/L				68	126

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:06:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	616607	3
	Be	9	55.330	ug/L	1.709	3	9	105657	0
	C	13		ug/L			57054	53840	4
	Cl	37		ug/L			3021538	3172000	4
>	Sc	45		ug/L			603049	621016	3
	V	51	50.756	ug/L	1.831	3	5204	663165	0
	V-1	51	51.064	ug/L	1.713	3	161	661567	1
	Cr	52	50.239	ug/L	2.243	4	15338	579986	0
	Cr	53	51.248	ug/L	1.657	3	120	65027	1
	Mn	55	50.798	ug/L	1.864	3	851	787652	0
	Co	59	51.174	ug/L	1.941	3	76	615329	0
>	Ge	72		ug/L			436831	448760	1
	Ni	60	49.263	ug/L	1.727	3	19	133940	2
	Ni	62	48.858	ug/L	1.088	2	34	18708	1
	Cu	63	48.863	ug/L	0.420	0	79	298420	0
	Cu	65	49.434	ug/L	1.210	2	33	136392	1
	Zn	66	50.157	ug/L	0.152	0	137	81677	1
	Zn	67	50.782	ug/L	1.078	2	26	13480	1
	Zn	68	50.525	ug/L	0.420	0	127	59212	1
	As	75	49.336	ug/L	0.381	0	255	75030	1
	As-1	75	49.336	ug/L	0.698	1	8509	83438	1
	Se	82	49.758	ug/L	0.380	0	6	8216	1
	Se	78	49.741	ug/L	1.322	2	8644	29670	0
	Mo	98	44.752	ug/L	0.239	0	14	194959	1
	Y	89		ug/L			278872	290428	1
	Kr	83		ug/L			509	534	7
>	In	115		ug/L			878990	885081	1
	Ag	107	43.687	ug/L	0.189	0	24	539310	1
	Cd	111	50.922	ug/L	0.370	0	66	219439	1
	Cd	114	50.288	ug/L	0.539	1	45	538788	1
	Sb	121	50.806	ug/L	0.676	1	270	695101	0
	Sb	123	49.938	ug/L	0.618	1	194	523591	0
	Ba	135	50.434	ug/L	0.596	1	45	193573	0
	Ba	137	49.702	ug/L	0.841	1	76	329439	1
>	Tb	159		ug/L			958896	993709	2
	Tl	205	52.637	ug/L	0.743	1	228	1507736	0
	Pb	208	51.215	ug/L	1.075	2	272	1935325	0
	Bi	209		ug/L			2065247	2040778	1
	Th	232	52.632	ug/L	0.843	1	1210	1898089	0
	U	238	53.915	ug/L	1.105	2	68	1976336	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:13:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	612926 ✓	0
	Be	9	-0.000	ug/L	0.003	2252	9	8	73
	C	13		ug/L			57054	55989	2
	Cl	37		ug/L			3021538	3095799	0
>	Sc	45		ug/L			603049	595688 ✓	2
	V	51	-0.006	ug/L	0.014	251	5204	5066	1
	V-1	51	-0.002	ug/L	0.001	30	161	133	8
	Cr	52	-0.009	ug/L	0.043	468	15338	15044	0
	Cr	53	0.003	ug/L	0.006	204	120	122	8
	Mn	55	-0.036	ug/L	0.001	3	851	300	9
	Co	59	-0.000	ug/L	0.001	536	76	72	20
>	Ge	72		ug/L			436831	437663 ✓	1
	Ni	60	-0.002	ug/L	0.002	151	19	15	37
	Ni	62	0.061	ug/L	0.020	32	34	57	14
	Cu	63	-0.000	ug/L	0.001	581	79	78	8
	Cu	65	-0.003	ug/L	0.001	36	33	25	8
	Zn	66	-0.007	ug/L	0.008	115	137	125	9
	Zn	67	-0.027	ug/L	0.018	67	26	19	25
	Zn	68	0.005	ug/L	0.013	272	127	132	12
	As	75	-0.010	ug/L	0.008	76	255	241	3
	As-1	75	0.018	ug/L	0.125	693	8509	8550	1
	Se	82	-0.025	ug/L	0.055	218	6	2	399
	Se	78	0.090	ug/L	0.429	476	8644	8696	0
	Mo	98	0.013	ug/L	0.011	87	14	67	68
	Y	89		ug/L			278872	285551	1
	Kr	83		ug/L			509	517	5
>	In	115		ug/L			878990	867554 ✓	1
	Ag	107	0.004	ug/L	0.007	179	24	68	116
	Cd	111	0.004	ug/L	0.008	182	66	83	38
	Cd	114	0.003	ug/L	0.007	234	45	73	91
	Sb	121	0.049	ug/L	0.008	17	270	920	11
	Sb	123	0.050	ug/L	0.007	14	194	706	9
	Ba	135	-0.006	ug/L	0.005	76	45	21	85
	Ba	137	-0.006	ug/L	0.005	82	76	38	76
>	Tb	159		ug/L			958896	961137 ✓	0
	Tl	205	0.006	ug/L	0.006	102	228	385	41
	Pb	208	-0.002	ug/L	0.002	118	272	209	37
	Bi	209		ug/L			2065247	2044194	0
	Th	232	0.078	ug/L	0.004	4	1210	3945	4
	U	238	0.001	ug/L	0.001	207	68	90	49

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:18:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	639890	2
	Be	9	0.180	ug/L	0.014	7	9	366	8
	C	13		ug/L			57054	63148	2
	Cl	37		ug/L			3021538	3015037	3
>	Sc	45		ug/L			603049	641133	1
	V	51	5.733	ug/L	0.122	2	5204	82322	3
	V-1	51	5.821	ug/L	0.108	1	161	78068	2
	Cr	52	6.570	ug/L	0.114	1	15338	92566	2
	Cr	53	6.857	ug/L	0.112	1	120	9099	1
	Mn	55	248.177	ug/L	8.136	3	851	3972359	2
	Co	59	1.902	ug/L	0.063	3	76	23711	3
>	Ge	72		ug/L			436831	460097	1
	Ni	60	6.496	ug/L	0.053	0	19	18131	0
	Ni	62	6.641	ug/L	0.166	2	34	2639	3
	Cu	63	3.638	ug/L	0.044	1	79	22862	2
	Cu	65	3.720	ug/L	0.148	3	33	10554	3
	Zn	66	44.584	ug/L	0.830	1	137	74453	2
	Zn	67	47.057	ug/L	1.139	2	26	12812	3
	Zn	68	46.143	ug/L	0.552	1	127	55460	2
	As	75	3.306	ug/L	0.016	0	255	5405	1
	As-1	75	3.070	ug/L	0.072	2	8509	13727	0
	Se	82	∿ 0.037	ug/L	0.056	148	6	12	72
	Se	78	-0.822	ug/L	0.328	39	8644	8751	0
	Mo	98	0.100	ug/L	0.005	5	14	462	4
	Y	89		ug/L			278872	324242	1
	Kr	83		ug/L			509	538	0
>	In	115		ug/L			878990	917242	0
	Ag	107	0.034	ug/L	0.001	2	24	463	3
	Cd	111	0.462	ug/L	0.004	0	66	2134	1
	Cd	114	0.433	ug/L	0.012	2	45	4850	3
	Sb	121	∿ 0.016	ug/L	0.003	18	270	510	9
	Sb	123	0.017	ug/L	0.003	16	194	384	8
	Ba	135	82.687	ug/L	1.728	2	45	328910	2
	Ba	137	81.131	ug/L	1.610	1	76	557337	2
>	Tb	159		ug/L			958896	1030736	0
	Tl	205	∿ 0.037	ug/L	0.003	9	228	1347	8
	Pb	208	12.607	ug/L	0.253	2	272	494530	2
	Bi	209		ug/L			2065247	2140804	0
	Th	232	1.210	ug/L	0.030	2	1210	46545	2
	U	238	0.145	ug/L	0.003	2	68	5587	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:22:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	661214	1
	Be	9	0.891	ug/L	0.054	6	9	1835	5
	C	13		ug/L			57054	80072	5
	Cl	37		ug/L			3021538	3187636	3
>	Sc	45		ug/L			603049	705496 ✓	0
	V	51	25.758	ug/L	0.167	0	5204	385673	1
	V-1	51	25.897	ug/L	0.204	0	161	381541	1
	Cr	52	30.350	ug/L	0.541	1	15338	405557	1
	Cr	53	30.815	ug/L	0.448	1	120	44506	1
	Mn	55	1079.796	ug/L	20.740	1	851	19015205	1
	Co	59	8.537	ug/L	0.102	1	76	116810	2
>	Ge	72		ug/L			436831	455024	2
	Ni	60	31.745	ug/L	0.853	2	19	87518	0
	Ni	62	33.010	ug/L	0.326	0	34	12828	2
	Cu	63	17.622	ug/L	0.602	3	79	109135	1
	Cu	65	18.202	ug/L	0.321	1	33	50940	0
	Zn	66	210.322	ug/L	4.463	2	137	346721	0
	Zn	67	226.685	ug/L	2.147	0	26	60934	3
	Zn	68	217.996	ug/L	3 300	1	127	258555	0
	As	75	16.254	ug/L	0.224	1	255	25238	1
	As-1	75	16.010	ug/L	0.377	2	8509	33435	0
	Se	82	-0.271	ug/L	0.132	48	6	-38	54
	Se	78	-0.620	ug/L	0.555	89	8644	8738	0
	Mo	98	0.510	ug/L	0.008	1	14	2269	3
	Y	89		ug/L			278872	424122	1
	Kr	83		ug/L			509	843	4
>	In	115	11.16.12	ug/L			878990	914187	1
	Ag	107	0.172	ug/L	0.007	3	24	2223	2
	Cd	111	2.203	ug/L	0 072	3	66	9871	3
	Cd	114	2.073	ug/L	0.012	0	45	22988	1
	Sb	121	0.067	ug/L	0.006	9	270	1226	7
	Sb	123	0.068	ug/L	0.002	3	194	939	1
	Ba	135	418.950	ug/L	2.768	0	45	1660660	1
	Ba	137	410.624	ug/L	6.362	1	76	2810733	1
>	Tb	159		ug/L			958896	1077726	0
	Tl	205	0.188	ug/L	0.001	0	228	6089	0
	Pb	208	59.595	ug/L	0.142	0	272	2443071	0
	Bi	209		ug/L			2065247	2134406	0
	Th	232	5.631	ug/L	0 023	0	1210	221502	0
	U	238	0.702	ug/L	0.006	0	68	28002	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:26:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			617808	656179	1
	Be	**9**	**0.904**	ug/L	0.062	6	9	1846	5
	C	**13**		ug/L			57054	78922	3
	Cl	**37**		ug/L			3021538	3149823	2
>	**Sc**	**45**		ug/L			603049	692661	1
	V	**51**	**29.486**	ug/L	0.737	2	5204	432545	2
	V-1	**51**	**29.793**	ug/L	0.610	2	161	430877	1
	Cr	**52**	**29.958**	ug/L	0.249	0	15338	393269	1
	Cr	**53**	**30.964**	ug/L	0.460	1	120	43906	1
	Mn	**55**	**1003.489**	ug/L	28.393	2	851	17347594	1
	Co	**59**	**8.706**	ug/L	0.237	2	76	116924	2
>	**Ge**	**72**		ug/L			436831	449419	2
	Ni	**60**	**31.845**	ug/L	1.517	4	19	86679	2
	Ni	**62**	**34.021**	ug/L	0.501	1	34	13055	1
	Cu	**63**	**17.730**	ug/L	0.178	1	79	108487	1
	Cu	**65**	**18.178**	ug/L	0.573	3	33	50236	0
	Zn	**66**	**204.494**	ug/L	4.836	2	137	332938	0
	Zn	**67**	**217.911**	ug/L	2.990	1	26	57839	1
	Zn	**68**	**212.768**	ug/L	4.228	1	127	249223	0
	As	**75**	**15.373**	ug/L	0.677	4	255	23579	1
	As-1	**75**	**15.274**	ug/L	0.825	5	8509	31895	1
	Se	**82**	**-0.244**	ug/L	0.037	15	6	-33	15
	Se	**78**	**-0.075**	ug/L	0.552	731	8644	8858	0
	Mo	**98**	**0.546**	ug/L	0.017	3	14	2396	2
	Y	**89**		ug/L			278872	426007	1
	Kr	**83**		ug/L			509	830	2
>	**In**	**115**		ug/L			878990	921088	1
	Ag	**107**	**0.165**	ug/L	0.004	2	24	2145	1
	Cd	**111**	**2.002**	ug/L	0.059	2	66	9042	1
	Cd	**114**	**1.882**	ug/L	0.027	1	45	21027	0
	Sb	**121**	**0.056**	ug/L	0.001	2	270	1087	2
	Sb	**123**	**0.054**	ug/L	0.001	1	194	788	1
	Ba	**135**	**383.623**	ug/L	5.036	1	45	1531978	0
	Ba	**137**	**379.538**	ug/L	5.375	1	76	2617351	0
>	**Tb**	**159**		ug/L			958896	1071181	1
	Tl	**205**	**0.180**	ug/L	0.003	1	228	5826	0
	Pb	**208**	**54.650**	ug/L	0.785	1	272	2226420	0
	Bi	**209**		ug/L			2065247	2100698	1
	Th	**232**	**5.819**	ug/L	0.109	1	1210	227402	0
	U	**238**	**0.681**	ug/L	0.010	1	68	26996	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:30:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			617808	665415	2
	Be	9	26.774	ug/L	0.780	2	9	55190	0
	C	13		ug/L			57054	71221	1
	Cl	37		ug/L			3021538	3070987	3
>	Sc	45		ug/L			603049	699358	2
	V	51	55.618	ug/L	2.745	4	5204	817909	2
	V-1	51	56.011	ug/L	2.566	4	161	817231	2
	Cr	52	56.087	ug/L	1.275	2	15338	727745	2
	Cr	53	57.371	ug/L	0.323	0	120	82018	2
	Mn	55	1049.967	ug/L	31.200	2	851	18322632	0
	Co	59	33.510	ug/L	0.954	2	76	454013	0
>	Ge	72		ug/L			436831	461836	1
	Ni	60	56.296	ug/L	0.203	0	19	157567	0
	Ni	62	57.449	ug/L	0.598	1	34	22634	0
	Cu	63	42.232	ug/L	0.528	1	79	265471	1
	Cu	65	42.020	ug/L	0.210	0	33	119346	1
	Zn	66	269.443	ug/L	2.808	1	137	450894	0
	Zn	67	282.952	ug/L	2.287	0	26	77184	1
	Zn	68	283.399	ug/L	4.306	1	127	341155	0
	As	75	39.077	ug/L	0.718	1	255	61210	1
	As-1	75	38.859	ug/L	0.535	1	8509	69543	0
	Se	82	74.037	ug/L	0.740	0	6	12578	0
	Se	78	73.866	ug/L	0.519	0	8644	40918	1
	Mo	98	20.168	ug/L	0.390	1	14	90418	1
	Y	89		ug/L			278872	432510	0
	Kr	83		ug/L			509	844	3
>	In	115		ug/L			878990	908843	0
	Ag	107	21.379	ug/L	0.301	1	24	271019	1
	Cd	111	27.019	ug/L	0.340	1	66	119590	1
	Cd	114	26.722	ug/L	0.464	1	45	294006	1
	Sb	121	1.284	ug/L	0.008	0	270	18307	1
	Sb	123	1.267	ug/L	0.011	0	194	13842	0
	Ba	135	417.476	ug/L	6.309	1	45	1645202	1
	Ba	137	413.365	ug/L	2.872	0	76	2812964	0
>	Tb	159		ug/L			958896	1077683	0
	Tl	205	25.188	ug/L	0.180	0	228	782728	0
	Pb	208	80.699	ug/L	0.530	0	272	3308011	0
	Bi	209		ug/L			2065247	2080469	0
	Th	232	32.137	ug/L	0.105	0	1210	1257725	0
	U	238	26.584	ug/L	0.313	1	68	1057156	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:34:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			617808	664429	2
	Be	9	27.706	ug/L	1.450	5	9	57003	2
	C	13		ug/L			57054	78997	0
	Cl	37		ug/L			3021538	3183423	0
>	Sc	45		ug/L			603049	697871	4
	V	51	49.080	ug/L	1.426	2	5204	720918	2
	V-1	51	49.523	ug/L	1.791	3	161	720828	1
	Cr	52	53.272	ug/L	2.332	4	15338	689945	1
	Cr	53	54.731	ug/L	3.737	6	120	77935	2
	Mn	55	1087.992	ug/L	39.935	3	851	18934618	0
	Co	59	32.198	ug/L	1.861	5	76	434786	1
>	Ge	72		ug/L			436831	447471	0
	Ni	60	57.664	ug/L	0.598	1	19	156375	0
	Ni	62	57.868	ug/L	1.416	2	34	22088	1
	Cu	63	42.279	ug/L	0.626	1	79	257483	0
	Cu	65	43.677	ug/L	0.965	2	33	120179	1
	Zn	66	289.984	ug/L	2.084	0	137	470218	1
	Zn	67	293.612	ug/L	0.444	0	26	77597	0
	Zn	68	296.692	ug/L	6.923	2	127	346040	1
	As	75	42.257	ug/L	0.578	1	255	64114	0
	As-1	75	41.744	ug/L	0.529	1	8509	71740	1
	Se	82	82.625	ug/L	1.009	1	6	13600	0
	Se	78	81.406	ug/L	0.798	0	8644	42790	1
	Mo	98	24.092	ug/L	0.558	2	14	104647	1
	Y	89		ug/L			278872	412249	0
	Kr	83		ug/L			509	819	3
>	In	115		ug/L			878990	910642	1
	Ag	107	22.960	ug/L	0.625	2	24	291574	1
	Cd	111	27.932	ug/L	0.361	1	66	123861	0
	Cd	114	27.555	ug/L	0.531	1	45	303741	1
	Sb	121	24.720	ug/L	0.251	1	270	348119	0
	Sb	123	24.301	ug/L	0.240	0	194	262260	1
	Ba	135	423.194	ug/L	2.141	0	45	1671012	1
	Ba	137	422.360	ug/L	7.180	1	76	2879593	1
>	Tb	159		ug/L			958896	1055026	2
	Tl	205	26.460	ug/L	0 752	2	228	804674	0
	Pb	208	84.912	ug/L	1.613	1	272	3406590	0
	Bi	209		ug/L			2065247	2067427	2
	Th	232	31.766	ug/L	0.597	1	1210	1216784	0
	U	238	27.521	ug/L	0.860	3	68	1071031	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:39:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

r Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	675414	3
	Be	9	0.542	ug/L	0.030	5	9	1143	2
	C	13		ug/L			57054	86880	1
	Cl	37		ug/L			3021538	3193829	2
>	Sc	45		ug/L			603049	696641	2
	V	51	26.327	ug/L	0.648	2	5204	388939	1
	V-1	51	26.439	ug/L	0.638	2	161	384464	1
	Cr	52	16.570	ug/L	0.341	2	15338	226612	1
	Cr	53	16.912	ug/L	0.304	1	120	24176	1
	Mn	55	1303.681	ug/L	57.982	4	851	22652062	1
	Co	59	6.709	ug/L	0.135	2	76	90621	1
>	Ge	72		ug/L			436831	456270	0
	Ni	60	13.392	ug/L	0.107	0	19	37046	0
	Ni	62	14.435	ug/L	0.308	2	34	5645	2
	Cu	63	16.488	ug/L	0.147	0	79	102445	1
	Cu	65	16.761	ug/L	0.560	3	33	47048	3
	Zn	66	266.483	ug/L	4.305	1	137	440579	1
	Zn	67	262.136	ug/L	3.983	1	26	70639	0
	Zn	68	273.469	ug/L	1.994	0	127	325283	1
	As	75	17.506	ug/L	0.109	0	255	27240	0
	As-1	75	17.276	ug/L	0.110	0	8509	35483	0
	Se	82	-0.032	ug/L	0.056	176	6	1	803
	Se	78	-0.644	ug/L	0.199	30	8644	8755	1
	Mo	98	0.415	ug/L	0.012	2	14	1854	3
	Y	89		ug/L			278872	382056	0
	Kr	83		ug/L			509	680	1
>	In	115		ug/L			878990	960013	0
	Ag	107	0.112	ug/L	0.007	5	24	1522	5
	Cd	111	5.082	ug/L	0.027	0	66	23818	0
	Cd	114	5.124	ug/L	0.075	1	45	59585	1
	Sb	121	0.367	ug/L	0.008	2	270	5741	2
	Sb	123	0.360	ug/L	0.006	1	194	4305	1
	Ba	135	332.012	ug/L	2.481	0	45	1381993	0
	Ba	137	330.181	ug/L	7.446	2	76	2373308	1
>	Tb	159		ug/L			958896	1068088	0
	Tl	205	0.327	ug/L	0.005	1	228	10328	1
	Pb	208	238.573	ug/L	1.715	0	272	9691575	0
	Bi	209		ug/L			2065247	2168153	0
	Th	232	5.576	ug/L	0.049	0	1210	217380	0
	U	238	0.520	ug/L	0.004	0	68	20581	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:43:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			617808	665043	1
	Be	9	0.759	ug/L	0.026	3	9	1573	4
	C	13		ug/L			57054	83568	1
	Cl	37		ug/L			3021538	3116959	1
>	Sc	45		ug/L			603049	691985	2
	V	51	24.848	ug/L	0.604	2	5204	364978	0
	V-1	51	25.010	ug/L	0.850	3	161	361223	1
	Cr	52	21.536	ug/L	0.149	0	15338	287366	2
	Cr	53	22.060	ug/L	0.912	4	120	31271	2
	Mn	55	738.989	ug/L	21.750	2	851	12759774	0
	Co	59	6.675	ug/L	0.231	3	76	89536	0
>	Ge	72		ug/L			436831	456752	0
	Ni	60	20.317	ug/L	0.307	1	19	56253	1
	Ni	62	21.587	ug/L	0.184	0	34	8434	0
	Cu	63	18.348	ug/L	0.245	1	79	114109	1
	Cu	65	18.519	ug/L	0.315	1	33	52039	1
	Zn	66	86.660	ug/L	0.684	0	137	143530	0
	Zn	67	105.288	ug/L	2.289	2	26	28422	2
	Zn	68	96.403	ug/L	0 238	0	127	114872	0
	As	75	6.826	ug/L	0.121	1	255	10795	1
	As-1	75	6.592	ug/L	0.098	1	8509	19057	0
	Se	82	-0.161	ug/L	0.037	23	6	-20	30
	Se	78	-0.566	ug/L	0.084	14	8644	8797	0
	Mo	98	0.349	ug/L	0.004	1	14	1563	1
	Y	89		ug/L			278872	439261	1
	Kr	83		ug/L			509	780	6
>	In	115		ug/L			878990	907986	0
	Ag	107	0.131	ug/L	0.005	3	24	1688	4
	Cd	111	0.709	ug/L	0.015	2	66	3204	2
	Cd	114	0.591	ug/L	0.016	2	45	6540	2
	Sb	121	0.048	ug/L	0.000	0	270	948	0
	Sb	123	0.049	ug/L	0.005	10	194	727	6
	Ba	135	329.117	ug/L	6.643	2	45	1295678	1
	Ba	137	325.155	ug/L	1.741	0	76	2210619	0
>	Tb	159		ug/L			958896	1061463	0
	Tl	205	0.138	ug/L	0.004	2	228	4466	2
	Pb	208	32.415	ug/L	0.287	0	272	1308875	0
	Bi	209		ug/L			2065247	2108698	0
	Th	232	5.728	ug/L	0.064	1	1210	221892	0
	U	238	1.196	ug/L	0.017	1	68	46916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:47:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	652724	1
	Be	**9**	**0.498**	ug/L	0.010	1	9	1017	0
	C	**13**		ug/L			57054	80677	2
	Cl	**37**		ug/L			3021538	3121012	0
>	**Sc**	**45**		ug/L			603049	683577	1
	V	**51**	**18.200**	ug/L	0.341	1	5204	265743	1
	V-1	**51**	**18.293**	ug/L	0.413	2	161	261161	1
	Cr	**52**	**12.225**	ug/L	0.142	1	15338	168657	1
	Cr	**53**	**12.514**	ug/L	0.190	1	120	17592	0
	Mn	**55**	**1093.742**	ug/L	11.264	1	851	18665780	2
	Co	**59**	**4.802**	ug/L	0.018	0	76	63698	0
>	**Ge**	**72**		ug/L			436831	461143	1
	Ni	**60**	**13.477**	ug/L	0.144	1	19	37679	1
	Ni	**62**	**14.269**	ug/L	0.268	1	34	5639	1
	Cu	**63**	**10.156**	ug/L	0.391	3	79	63786	2
	Cu	**65**	**10.545**	ug/L	0.260	2	33	29926	1
	Zn	**66**	**148.411**	ug/L	0.698	0	137	248057	0
	Zn	**67**	**166.297**	ug/L	2.464	1	26	45299	0
	Zn	**68**	**162.948**	ug/L	3.309	2	127	195909	1
	As	**75**	**6.130**	ug/L	0.091	1	255	9815	0
	As-1	**75**	**5.833**	ug/L	0.179	3	8509	18056	0
	Se	**82**	**-0.101**	ug/L	0.089	87	6	-10	141
	Se	**78**	**-0.925**	ug/L	0 321	34	8644	8726	0
	Mo	**98**	**0.311**	ug/L	0 005	1	14	1405	2
	Y	**89**		ug/L			278872	373026	1
	Kr	**83**		ug/L			509	683	5
>	**In**	**115**		ug/L			878990	932356	1
	Ag	**107**	**0.123**	ug/L	0.003	2	24	1625	3
	Cd	**111**	**1.453**	ug/L	0.049	3	66	6662	2
	Cd	**114**	**1.370**	ug/L	0.004	0	45	15511	1
	Sb	**121**	**0.051**	ug/L	0.001	2	270	1028	1
	Sb	**123**	**0.054**	ug/L	0.002	4	194	800	3
	Ba	**135**	**419.789**	ug/L	2.337	0	45	1697017	0
	Ba	**137**	**413.188**	ug/L	13.083	3	76	2883882	2
>	**Tb**	**159**		ug/L			958896	1051314	1
	Tl	**205**	**0.144**	ug/L	0.001	1	228	4628	0
	Pb	**208**	**66.661**	ug/L	1.078	1	272	2665360	0
	Bi	**209**		ug/L			2065247	2137223	1
	Th	**232**	**3.789**	ug/L	0.059	1	1210	145806	0
	U	**238**	**0.460**	ug/L	0.008	1	68	17899	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:52:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag, V, Cr, Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			617808	668100	0
	Be	**9**	**0.969**	ug/L	0.018	1	9	2015	2
	C	**13**		ug/L			57054	86720	1
	Cl	**37**		ug/L			3021538	3117146	1
>	**Sc**	**45**		ug/L			603049	727232	1
	V	**51**	**34.773**	ug/L	0.481	1	5204	534469	1
	V-1	**51**	**35.084**	ug/L	0.393	1	161	532744	1
	Cr	**52**	**60.790**	ug/L	1.365	2	15338	818683	1
	Cr	**53**	**61.867**	ug/L	0.665	1	120	91959	0
	Mn	**55**	**1306.034**	ug/L	18.637	1	851	23709508	1
	Co	**59**	**10.865**	ug/L	0.145	1	76	153185	0
>	**Ge**	**72**		ug/L			436831	452436	1
	Ni	**60**	**57.991**	ug/L	1.085	1	19	158982	0
	Ni	**62**	**61.884**	ug/L	0.114	0	34	23884	1
	Cu	**63**	**22.498**	ug/L	0.696	3	79	138536	1
	Cu	**65**	**22.506**	ug/L	0.110	0	33	62636	1
	Zn	**66**	**282.766**	ug/L	6.666	2	137	463488	1
	Zn	**67**	**295.755**	ug/L	4.246	1	26	79037	2
	Zn	**68**	**297.704**	ug/L	7.854	2	127	351024	1
	As	**75**	**15.755**	ug/L	0.446	2	255	24331	2
	As-1	**75**	**15.538**	ug/L	0.544	3	8509	32526	1
	Se	**82**	u **-0.270**	ug/L	0.071	26	6	-38	31
	Se	**78**	**-0.617**	ug/L	0.590	95	8644	8690	1
	Mo	**98**	**0.483**	ug/L	0.019	3	14	2134	2
	Y	**89**		ug/L			278872	395486	1
	Kr	**83**		ug/L			509	786	1
>	**In**	**115**		ug/L			878990	911151	0
	Ag	**107**	**0.162**	ug/L	0.002	1	24	2080	0
	Cd	**111**	**4.159**	ug/L	0.027	0	66	18515	1
	Cd	**114**	**4.070**	ug/L	0.036	0	45	44932	0
	Sb	**121**	u **0.046**	ug/L	0.001	2	270	934	2
	Sb	**123**	**0.050**	ug/L	0.003	5	194	738	3
	Ba	**135**	**467.691**	ug/L	5.446	1	45	1847758	1
	Ba	**137**	**460.990**	ug/L	1.948	0	76	3145110	0
>	**Tb**	**159**		ug/L			958896	1067974	0
	Tl	**205**	**0.240**	ug/L	0.004	1	228	7656	0
	Pb	**208**	**180.359**	ug/L	0.915	0	272	7325986	0
	Bi	**209**		ug/L			2065247	2097628	0
	Th	**232**	**5.726**	ug/L	0.066	1	1210	223154	0
	U	**238**	**0.564**	ug/L	0.013	2	68	22307	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:56:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

r Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			617808	667594	1
	Be	9	0.531	ug/L	0.006	1	9	1109	1
	C	13		ug/L			57054	83532	4
	Cl	37		ug/L			3021538	3176588	2
>	Sc	45		ug/L			603049	687264 ✓	2
	V	51	18.989	ug/L	0.642	3	5204	278399	1
	V-1	51	19.100	ug/L	0.600	3	161	274053	1
	Cr	52	12.526	ug/L	0.407	3	15338	173261	1
	Cr	53	12.874	ug/L	0.271	2	120	18188	0
	Mn	55	1034.710	ug/L	6.483	0	851	17751854	1
	Co	59	4.966	ug/L	0.130	2	76	66201	0
>	Ge	72		ug/L			436831	460712	1
	Ni	60	11.570	ug/L	0.256	2	19	32313	1
	Ni	62	12.796	ug/L	0.454	3	34	5055	2
	Cu	63	10.473	ug/L	0.231	2	79	65716	0
	Cu	65	10.520	ug/L	0.338	3	33	29819	1
	Zn	66	130.355	ug/L	2.877	2	137	217647	1
	Zn	67	142.595	ug/L	2 220	1	26	38809	1
	Zn	68	135.644	ug/L	2.996	2	127	162931	0
	As	75	13.043	ug/L	0.350	2	255	20555	0
	As-1	75	12.848	ug/L	0.436	3	8509	28938	0
	Se	82	-0.030	ug/L	0.053	174	6	1	675
	Se	78	-0.533	ug/L	0.440	82	8644	8886	0
	Mo	98	0.416	ug/L	0.009	2	14	1873	1
	Y	89		ug/L			278872	376401	2
	Kr	83		ug/L			509	669	2
>	In	115		ug/L			878990	927294	1
	Ag	107	0.088	ug/L	0.004	4	24	1167	2
	Cd	111	1.668	ug/L	0.021	1	66	7598	0
	Cd	114	1.571	ug/L	0.033	2	45	17676	1
	Sb	121	0.093	ug/L	0.006	6	270	1622	4
	Sb	123	0.095	ug/L	0.009	9	194	1243	6
	Ba	135	292.135	ug/L	6.007	2	45	1174384	0
	Ba	137	293.978	ug/L	2.247	0	76	2041337	2
>	Tb	159		ug/L			958896	1062277	1
	Tl	205	0.151	ug/L	0.005	2	228	4869	1
	Pb	208	74.996	ug/L	1.175	1	272	3029963	0
	Bi	209		ug/L			2065247	2146678	0
	Th	232	4.984	ug/L	0.143	2	1210	193370	1
	U	238	0.628	ug/L	0.013	1	68	24676	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:00:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	622127 ✓	1
	Be	9	55.023	ug/L	0.404	0	9	106084	1
	C	13		ug/L			57054	56636	2
	Cl	37		ug/L			3021538	3084122	0
>	Sc	45		ug/L			603049	637033 ✓	0
	V	51	49.171	ug/L	0.719	1	5204	659752	1
	V-1	51	49.706	ug/L	0.712	1	161	661068	1
	Cr	52	49.569	ug/L	0.205	0	15338	587860	1
	Cr	53	51.322	ug/L	0.302	0	120	66849	0
	Mn	55	48.994	ug/L	1.108	2	851	780068	2
	Co	59	50.318	ug/L	0.704	1	76	621209	1
>	Ge	72		ug/L			436831	448026 ✓	1
	Ni	60	48.909	ug/L	1.333	2	19	132773	1
	Ni	62	48.932	ug/L	1.491	3	34	18707	3
	Cu	63	49.609	ug/L	1.000	2	79	302503	2
	Cu	65	49.436	ug/L	0.699	1	33	136187	0
	Zn	66	50.375	ug/L	1.295	2	137	81911	3
	Zn	67	51.577	ug/L	0.958	1	26	13669	1
	Zn	68	50.823	ug/L	0.639	1	127	59464	1
	As	75	49.934	ug/L	0.541	1	255	75812	1
	As-1	75	49.902	ug/L	0.566	1	8509	84158	1
	Se	82	50.689	ug/L	0.615	1	6	8356	1
	Se	78	50.583	ug/L	0.893	1	8644	29974	0
	Mo	98	45.686	ug/L	0.858	1	14	198668	0
	Y	89		ug/L			278872	293801	1
	Kr	83		ug/L			509	548	1
>	In	115		ug/L			878990	891368 ✓	1
	Ag	107	44.611	ug/L	1.417	3	24	554663	3
	Cd	111	50.809	ug/L	0.815	1	66	220479	1
	Cd	114	50.505	ug/L	0.875	1	45	544878	0
	Sb	121	50.313	ug/L	0.848	1	270	693204	1
	Sb	123	50.325	ug/L	0.735	1	194	531411	1
	Ba	135	50.278	ug/L	0.937	1	45	194325	0
	Ba	137	49.569	ug/L	0.756	1	76	330853	0
>	Tb	159		ug/L			958896	1005356 ✓	1
	Tl	205	51.592	ug/L	1.482	2	228	1495090	2
	Pb	208	50.711	ug/L	0.953	1	272	1938910	0
	Bi	209		ug/L			2065247	2074045	1
	Th	232	51.931	ug/L	0.564	1	1210	1894960	0
	U	238	52.825	ug/L	1.228	2	68	1959116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	624563 ✓	3
	Be	9	-0.002	ug/L	0.001	67	9	5	47
	C	13		ug/L			57054	58796	3
	Cl	37		ug/L			3021538	3039274	0
>	Sc	45		ug/L			603049	606912 ✓	1
	V	51	-0.002	ug/L	0.008	342	5204	5207	0
	V-1	51	-0.003	ug/L	0.003	103	161	129	28
	Cr	52	0.003	ug/L	0.027	1022	15338	15463	0
	Cr	53	0.002	ug/L	0.006	365	120	123	7
	Mn	55	-0.019	ug/L	0.021	106	851	566	56
	Co	59	-0.000	ug/L	0.002	880	76	74	33
>	Ge	72		ug/L			436831	435709 ✓	0
	Ni	60	0.005	ug/L	0.004	84	19	33	34
	Ni	62	0.035	ug/L	0.024	69	34	47	19
	Cu	63	0.002	ug/L	0.004	192	79	91	25
	Cu	65	0.000	ug/L	0.004	2557	33	33	30
	Zn	66	0.021	ug/L	0.027	125	137	170	25
	Zn	67	-0.014	ug/L	0.030	214	26	23	33
	Zn	68	0.020	ug/L	0.034	168	127	149	26
	As	75	0.008	ug/L	0.029	376	255	266	16
	As-1	75	0.043	ug/L	0.047	109	8509	8550	1
	Se	82	-0.003	ug/L	0.068	2146	6	5	190
	Se	78	0.173	ug/L	0.187	107	8644	8692	1
	Mo	98	0.007	ug/L	0.002	35	14	42	23
	Y	89		ug/L			278872	279515	1
	Kr	83		ug/L			509	534	5
>	In	115		ug/L			878990	870478 ✓	1
	Ag	107	0.001	ug/L	0.001	83	24	38	28
	Cd	111	-0.001	ug/L	0.002	218	66	61	13
	Cd	114	-0.001	ug/L	0.001	166	45	36	32
	Sb	121	0.039	ug/L	0.003	7	270	789	6
	Sb	123	0.042	ug/L	0.004	8	194	624	5
	Ba	135	-0.002	ug/L	0.005	255	45	37	48
	Ba	137	-0.001	ug/L	0.006	750	76	69	58
>	Tb	159		ug/L			958896	946388 ✓	0
	Tl	205	0.003	ug/L	0.005	166	228	301	41
	Pb	208	-0.001	ug/L	0.002	323	272	247	28
	Bi	209		ug/L			2065247	2058186	2
	Th	232	0.061	ug/L	0.005	8	1210	3282	6
	U	238	-0.000	ug/L	0.001	310	68	58	51

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:11:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

n Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			617808	620054	1
	Be	9	0.003	ug/L	0.004	160	9	14	58
	C	13		ug/L			57054	62399	4
	Cl	37		ug/L			3021538	3090649	0
>	Sc	45		ug/L			603049	617754	1
	V	51	< 0.001	ug/L	0.018	2001	5204	5340	2
	V-1	51	0.001	ug/L	0.010	683	161	183	69
	Cr	52	< -0.005	ug/L	0.042	843	15338	15650	1
	Cr	53	-0.003	ug/L	0.008	261	120	119	9
	Mn	55	0.117	ug/L	0.221	189	851	2663	127
	Co	59	< 0.004	ug/L	0.006	144	76	128	56
>	Ge	72		ug/L			436831	435872	0
	Ni	60	< 0.006	ug/L	0.008	146	19	35	64
	Ni	62	0.006	ug/L	0.008	146	34	36	8
	Cu	63	< 0.015	ug/L	0.005	35	79	166	18
	Cu	65	0.017	ug/L	0.006	34	33	77	20
	Zn	66	< 0.236	ug/L	0.027	11	137	510	8
	Zn	67	0.194	ug/L	0.072	37	26	76	24
	Zn	68	0.233	ug/L	0.041	17	127	391	12
	As	75	< 0.003	ug/L	0.013	406	255	259	7
	As-1	75	0.146	ug/L	0.033	22	8509	8705	0
	Se	82	< -0.035	ug/L	0.102	293	6	0	2289
	Se	78	0.547	ug/L	0.093	17	8644	8847	0
	Mo	98	0.002	ug/L	0.002	101	14	22	37
	Y	89		ug/L			278872	286809	0
	Kr	83		ug/L			509	542	6
	In	115		ug/L			878990	883860	0
	Ag	107	0.002	ug/L	0.003	150	24	48	74
	Cd	111	< 0.003	ug/L	0.002	70	66	80	11
	Cd	114	0.001	ug/L	0.003	233	45	60	58
	Sb	121	< 0.002	ug/L	0.006	305	270	299	28
	Sb	123	0.004	ug/L	0.006	170	194	235	29
	Ba	135	0.034	ug/L	0.058	170	45	177	126
	Ba	137	0.029	ug/L	0.053	181	76	272	130
	Tb	159		ug/L			958896	971400	0
	Tl	205	< 0.003	ug/L	0.007	260	228	307	64
	Pb	208	< 0.018	ug/L	0.021	116	272	947	82
	Bi	209		ug/L			2065247	2091724	0
	Th	232	0.051	ug/L	0.011	21	1210	3005	13
	U	238	0.001	ug/L	0.005	350	68	116	140

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:16:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637177	1
	Be	9	27.746	ug/L	0.182	0	9	54791	2
	C	13		ug/L			57054	59693	0
	Cl	37		ug/L			3021538	3042109	3
>	Sc	45		ug/L			603049	628614	1
	V	51	25.376	ug/L	0.041	0	5204	338631	1
	V-1	51	25.518	ug/L	0.098	0	161	334978	0
	Cr	52	25.556	ug/L	0.163	0	15338	306802	0
	Cr	53	26.020	ug/L	0.554	2	120	33500	1
	Mn	55	25.683	ug/L	0.640	2	851	403911	2
	Co	59	25.930	ug/L	0.028	0	76	315938	1
>	Ge	72		ug/L			436831	445162	1
	Ni	60	25.555	ug/L	0.561	2	19	68952	2
	Ni	62	25.622	ug/L	0.155	0	34	9750	1
	Cu	63	26.070	ug/L	0.372	1	79	157981	0
	Cu	65	26.586	ug/L	0.635	2	33	72785	1
	Zn	66	82.824	ug/L	3.099	3	137	133675	2
	Zn	67	76.468	ug/L	2.835	3	26	20120	2
	Zn	68	81.568	ug/L	2.335	2	127	94730	1
	As	75	24.851	ug/L	0.258	1	255	37618	0
	As-1	75	24.922	ug/L	0.596	2	8509	46100	1
	Se	82	79.897	ug/L	1.241	1	6	13083	0
	Se	78	80.307	ug/L	1.827	2	8644	42107	0
	Mo	98	22.397	ug/L	0.317	1	14	96787	0
	Y	89		ug/L			278872	291807	2
	Kr	83		ug/L			509	539	1
>	In	115		ug/L			878990	902557	1
	Ag	107	22.924	ug/L	0.462	2	24	288557	0
	Cd	111	24.972	ug/L	0.625	2	66	109753	1
	Cd	114	24.824	ug/L	0.470	1	45	271215	1
	Sb	121	24.852	ug/L	0.264	1	270	346865	0
	Sb	123	24.675	ug/L	0.527	2	194	263903	1
	Ba	135	25.342	ug/L	0.503	1	45	99209	1
	Ba	137	25.067	ug/L	0.489	1	76	169450	0
>	Tb	159		ug/L			958896	985357	0
	Tl	205	27.321	ug/L	0.153	0	228	776267	0
	Pb	208	27.023	ug/L	0.263	0	272	1012974	0
	Bi	209		ug/L			2065247	2118823	0
	Th	232	26.735	ug/L	0.520	1	1210	956859	1
	U	238	27.094	ug/L	0.337	1	68	985089	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:20:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			617808	661620	1
Be	9	0.571	ug/L	0.025	4	9	1179	3
C	13		ug/L			57054	78067	1
Cl	37		ug/L			3021538	3081139	2
Sc	45		ug/L			603049	684121	3
V	51	22.772	ug/L	0.457	2	5204	331172	1
V-1	51	22.970	ug/L	0.491	2	161	328029	1
Cr	52	15.871	ug/L	0.654	4	15338	213801	1
Cr	53	16.503	ug/L	0.744	4	120	23154	1
Mn	55	713.947	ug/L	29.223	4	851	12182391	0
Co	59	5.301	ug/L	0.219	4	76	70299	0
Ge	72		ug/L			436831	468592	2
Ni	60	13.049	ug/L	0.354	2	19	37061	0
Ni	62	14.537	ug/L	0.705	4	34	5836	3
Cu	63	10.546	ug/L	0.202	1	79	67308	0
Cu	65	11.027	ug/L	0.160	1	33	31798	1
Zn	66	84.842	ug/L	2.196	2	137	144111	0
Zn	67	93.890	ug/L	1.089	1	26	26005	2
Zn	68	89.803	ug/L	3.154	3	127	109734	1
As	75	7.220	ug/L	0.106	1	255	11698	1
As-1	75	6.945	ug/L	0.218	3	8509	20104	1
Se	82	-0.090	ug/L	0.060	67	6	-8	116
Se	78	-0.796	ug/L	0.393	49	8644	8923	0
Mo	98	0.350	ug/L	0.009	2	14	1606	2
Y	89		ug/L			278872	404829	2
Kr	83		ug/L			509	718	0
In	115		ug/L			878990	920986	1
Ag	107	0.073	ug/L	0.006	7	24	968	5
Cd	111	0.685	ug/L	0.045	6	66	3139	4
Cd	114	0.598	ug/L	0.012	1	45	6717	0
Sb	121	0.059	ug/L	0.007	11	270	1124	7
Sb	123	0.063	ug/L	0.009	13	194	887	9
Ba	135	214.642	ug/L	3.774	1	45	857051	1
Ba	137	211.558	ug/L	5.020	2	76	1458544	0
Tb	159		ug/L			958896	1041421	0
Tl	205	0.151	ug/L	0.007	4	228	4795	4
Pb	208	52.188	ug/L	0.316	0	272	2067388	0
Bi	209		ug/L			2065247	2127321	0
Th	232	5.435	ug/L	0.077	1	1210	206630	1
U	238	0.786	ug/L	0.012	1	68	30262	1

VR32 : 0934 G

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:24:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			617808	669928	1
	Be	9	0.536	ug/L	0.022	4	9	1122	3
	C	13		ug/L			57054	83548	2
	Cl	37		ug/L			3021538	3125573	1
>	Sc	45		ug/L			603049	699386	1
	V	51	19.592	ug/L	0.216	1	5204	292259	1
	V-1	51	19.639	ug/L	0.150	0	161	286888	1
	Cr	52	13.286	ug/L	0.465	3	15338	186005	3
	Cr	53	13.425	ug/L	0.174	1	120	19300	1
	Mn	55	826.523	ug/L	27.862	3	851	14427328	2
	Co	59	4.621	ug/L	0.077	1	76	62715	1
>	Ge	72		ug/L			436831	460122	0
	Ni	60	11.961	ug/L	0.407	3	19	33374	3
	Ni	62	13.230	ug/L	0.040	0	34	5221	0
	Cu	63	9.634	ug/L	0.034	0	79	60396	0
	Cu	65	10.019	ug/L	0.164	1	33	28378	1
	Zn	66	59.464	ug/L	1.703	2	137	99255	2
	Zn	67	74.523	ug/L	1.159	1	26	20272	1
	Zn	68	68.100	ug/L	0.753	1	127	81785	1
	As	75	4.577	ug/L	0.064	1	255	7381	1
	As-1	75	4.365	ug/L	0.127	2	8509	15739	1
	Se	82	-0.115	ug/L	0.062	53	6	-12	81
	Se	78	-0.557	ug/L	0.257	46	8644	8866	1
	Mo	98	0.356	ug/L	0.002	0	14	1603	0
	Y	89		ug/L			278872	397073	1
	Kr	83		ug/L			509	721	3
>	In	115		ug/L			878990	922652	1
	Ag	107	0.081	ug/L	0.002	2	24	1072	3
	Cd	111	0.468	ug/L	0.013	2	66	2171	2
	Cd	114	0.410	ug/L	0.011	2	45	4630	1
	Sb	121	0.031	ug/L	0.002	7	270	722	3
	Sb	123	0.034	ug/L	0.006	16	194	571	9
	Ba	135	234.694	ug/L	3.143	1	45	938848	0
	Ba	137	239.625	ug/L	2.929	1	76	1655343	0
>	Tb	159		ug/L			958896	1065594	1
	Tl	205	0.109	ug/L	0.005	4	228	3608	2
	Pb	208	21.591	ug/L	0.482	2	272	875095	0
	Bi	209		ug/L			2065247	2134801	0
	Th	232	4.798	ug/L	0.086	1	1210	186771	0
	U	238	0.760	ug/L	0.022	2	68	29937	1

VR32 · 00345

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:28:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			617808	657865	0
Be	9	0.538	ug/L	0.026	4	9	1106	5
C	13		ug/L			57054	72184	1
Cl	37		ug/L			3021538	3073208	1
Sc	45		ug/L			603049	676726	1
V	51	21.170	ug/L	0.626	2	5204	305009	1
V-1	51	21.332	ug/L	0.594	2	161	301438	2
Cr	52	14.128	ug/L	0.531	3	15338	190222	1
Cr	53	14.643	ug/L	0.290	1	120	20353	0
Mn	55	294.629	ug/L	9.357	3	851	4976355	1
Co	59	4.970	ug/L	0.048	0	76	65264	2
Ge	72		ug/L			436831	457772	1
Ni	60	12.163	ug/L	0.489	4	19	33751	2
Ni	62	13.276	ug/L	0.422	3	34	5212	3
Cu	63	11.692	ug/L	0.305	2	79	72897	1
Cu	65	11.791	ug/L	0.422	3	33	33212	2
Zn	66	43.020	ug/L	1.000	2	137	71471	1
Zn	67	51.921	ug/L	0.666	1	26	14060	1
Zn	68	47.739	ug/L	1.263	2	127	57068	1
As	75	3.181	ug/L	0.037	1	255	5186	2
As-1	75	3.012	ug/L	0 047	1	8509	13570	1
Se	82	0.085	ug/L	0.061	71	6	-7	133
Se	78	-0.342	ug/L	0.038	11	8644	8913	1
Mo	98	0.252	ug/L	0.012	4	14	1133	3
Y	89		ug/L			278872	400676	1
Kr	83		ug/L			509	729	2
In	115		ug/L			878990	914511	0
Ag	107	0.100	ug/L	0.001	1	24	1303	0
Cd	111	0.295	ug/L	0.022	7	66	1383	6
Cd	114	0.197	ug/L	0.005	2	45	2227	3
Sb	121	0.017	ug/L	0.003	17	270	518	8
Sb	123	0.017	ug/L	0.003	19	194	388	9
Ba	135	141.552	ug/L	1.158	0	45	561300	0
Ba	137	140.913	ug/L	1.413	1	76	964999	1
Tb	159		ug/L			958896	1036798	1
Tl	205	0.089	ug/L	0.001	1	228	2894	2
Pb	208	8.899	ug/L	0.145	1	272	351159	0
Bi	209		ug/L			2065247	2102953	1
Th	232	4.970	ug/L	0.084	1	1210	188211	0
U	238	0.885	ug/L	0.011	1	68	33930	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:32:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			617808	653961	1
	Be	9	0.451	ug/L	0.030	6	9	924	8
	C	13		ug/L			57054	68265	0
	Cl	37		ug/L			3021538	3127098	3
>	Sc	45		ug/L			603049	691582	1
	V	51	22.837	ug/L	0.414	1	5204	335837	1
	V-1	51	22.965	ug/L	0.404	1	161	331657	1
	Cr	52	14.833	ug/L	0.234	1	15338	203287	1
	Cr	53	15.233	ug/L	0.222	1	120	21634	0
	Mn	55	264.972	ug/L	11.276	4	851	4574139	3
	Co	59	4.892	ug/L	0.153	3	76	65636	2
>	Ge	72		ug/L			436831	464017	0
	Ni	60	12.393	ug/L	0.135	1	19	34866	0
	Ni	62	13.514	ug/L	0.198	1	34	5378	1
	Cu	63	10.776	ug/L	0.245	2	79	68125	2
	Cu	65	11.076	ug/L	0.148	1	33	31631	0
	Zn	66	36.820	ug/L	0.380	1	137	62038	1
	Zn	67	45.338	ug/L	1.670	3	26	12448	3
	Zn	68	40.521	ug/L	0.794	1	127	49133	2
	As	75	3.471	ug/L	0.064	1	255	5711	1
	As-1	75	3.186	ug/L	0.111	3	8509	14026	1
	Se	82	u -0.069	ug/L	0.057	82	6	-5	187
	Se	78	-0.805	ug/L	0.234	29	8644	8834	1
	Mo	98	0.265	ug/L	0.013	4	14	1207	4
	Y	89		ug/L			278872	393585	1
	Kr	83		ug/L			509	708	4
>	In	115		ug/L			878990	906983	1
	Ag	107	0.078	ug/L	0.003	4	24	1017	3
	Cd	111	0.222	ug/L	0.014	6	66	1047	6
	Cd	114	0.123	ug/L	0.006	4	45	1399	3
	Sb	121	u 0.001	ug/L	0.000	27	270	295	2
	Sb	123	0.003	ug/L	0.002	88	194	229	10
	Ba	135	104.402	ug/L	3.803	3	45	410465	2
	Ba	137	103.603	ug/L	1.346	1	76	703567	0
>	Tb	159		ug/L			958896	1041447	0
	Tl	205	u 0.079	ug/L	0.003	3	228	2624	3
	Pb	208	8.498	ug/L	0.025	0	272	336903	0
	Bi	209		ug/L			2065247	2107307	0
	Th	232	5.765	ug/L	0.016	0	1210	219092	0
	U	238	0.832	ug/L	0.007	0	68	32063	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:36:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			617808	652789	0
	Be	9	0.439	ug/L	0.017	3	9	898	3
	C	13		ug/L			57054	80698	0
	Cl	37		ug/L			3021538	3118216	0
>	Sc	45		ug/L			603049	687876	1
	V	51	19.876	ug/L	0.651	3	5204	291413	1
	V-1	51	20.089	ug/L	0.787	3	161	288487	2
	Cr	52	20.974	ug/L	0.449	2	15338	278674	2
	Cr	53	21.673	ug/L	0.617	2	120	30554	1
	Mn	55	656.654	ug/L	25.112	3	851	11273132	2
	Co	59	5.662	ug/L	0.153	2	76	75539	1
>	Ge	72		ug/L			436831	450104	1
	Ni	60	14.265	ug/L	0.480	3	19	38913	1
	Ni	62	15.016	ug/L	0.269	1	34	5791	1
	Cu	63	14.943	ug/L	0.188	1	79	91590	0
	Cu	65	15.306	ug/L	0.158	1	33	42387	1
	Zn	66	146.624	ug/L	3.058	2	137	239161	0
	Zn	67	156.398	ug/L	4.108	2	26	41579	1
	Zn	68	151.393	ug/L	1.220	0	127	177686	1
	As	75	8.811	ug/L	0.096	1	255	13655	0
	As-1	75	8.702	ug/L	0.148	1	8509	21981	0
	Se	82	-0.001	ug/L	0.099	13003	6	6	257
	Se	78	-0.164	ug/L	0.200	121	8644	8837	1
	Mo	98	0.314	ug/L	0.008	2	14	1386	2
	Y	89		ug/L			278872	390901	2
	Kr	83		ug/L			509	662	7
>	In	115		ug/L			878990	905498	1
	Ag	107	0.080	ug/L	0.001	1	24	1039	1
	Cd	111	2.372	ug/L	0.018	0	66	10525	1
	Cd	114	2.329	ug/L	0.056	2	45	25575	1
	Sb	121	0.099	ug/L	0.003	2	270	1668	0
	Sb	123	0.101	ug/L	0.006	6	194	1282	3
	Ba	135	284.284	ug/L	5.828	2	45	1115978	0
	Ba	137	281.896	ug/L	7.793	2	76	1910911	1
>	Tb	159		ug/L			958896	1037122	1
	Tl	205	0.132	ug/L	0.001	0	228	4187	1
	Pb	208	106.855	ug/L	1.005	0	272	4214768	1
	Bi	209		ug/L			2065247	2089907	1
	Th	232	5.293	ug/L	0.042	0	1210	200433	1
	U	238	0.554	ug/L	0.007	1	68	21288	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:40:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, V, Cr, Co, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			617808	652803	2
	Be	9	0.901	ug/L	0.011	1	9	1832	3
	C	13		ug/L			57054	105913	1
	Cl	37		ug/L			3021538	3247572	2
>	Sc	45		ug/L			603049	740908	0
	V	51	31.131	ug/L	0.647	2	5204	488193	2
	V-1	51	31.733	ug/L	0.469	1	161	490961	1
	Cr	52	79.497	ug/L	0.477	0	15338	1085099	0
	Cr	53	81.582	ug/L	1.029	1	120	123501	0
	Mn	55	2216.178	ug/L	9.067	0	851	40989699	0
	Co	59	19.382	ug/L	0.478	2	76	278349	2
>	Ge	72		ug/L			436831	451120	1
	Ni	60	74.609	ug/L	0.359	0	19	203975	1
	Ni	62	77.128	ug/L	2.645	3	34	29667	3
	Cu	63	47.456	ug/L	1.049	2	79	291346	1
	Cu	65	49.251	ug/L	1.214	2	33	136634	2
	Zn	66	660.554	ug/L	14.508	2	137	1079448	1
	Zn	67	669.234	ug/L	6.886	1	26	178287	2
	Zn	68	671.832	ug/L	18.454	2	127	789831	2
	As	75	17.911	ug/L	0.179	0	255	27549	0
	As-1	75	17.776	ug/L	0.273	1	8509	35842	0
	Se	82	0.114	ug/L	0.036	31	6	25	23
	Se	78	0.017	ug/L	0.386	2326	8644	8932	0
	Mo	98	0.654	ug/L	0.010	1	14	2877	1
	Y	89		ug/L			278872	484044	0
	Kr	83		ug/L			509	764	3
>	In	115		ug/L			878990	944834	1
	Ag	107	0.235	ug/L	0.007	3	24	3121	3
	Cd	111	11.250	ug/L	0.062	0	66	51807	1
	Cd	114	11.031	ug/L	0.241	2	45	126196	1
	Sb	121	0.181	ug/L	0.001	0	270	2932	1
	Sb	123	0.180	ug/L	0.006	3	194	2224	1
	Ba	135	883.988	ug/L	10.305	1	45	3621238	1
	Ba	137	878.169	ug/L	15.805	1	76	6211855	1
>	Tb	159		ug/L			958896	1057086	0
	Tl	205	0.633	ug/L	0.007	1	228	19538	0
	Pb	208	503.600	ug/L	4.184	0	272	20246490	0
	Bi	209		ug/L			2065247	2096336	0
	Th	232	6.707	ug/L	0.049	0	1210	258508	0
	U	238	0.869	ug/L	0.010	1	68	33976	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:45:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			617808	659860	1
Be	9	0.490	ug/L	0.003	0	9	1010	1
C	13		ug/L			57054	87747	1
Cl	37		ug/L			3021538	3207753	0
Sc	45		ug/L			603049	684691	0
V	51	18.100	ug/L	0.106	0	5204	264766	0
V-1	51	18.252	ug/L	0.104	0	161	261029	0
Cr	52	15.037	ug/L	0.209	1	15338	203790	0
Cr	53	15.528	ug/L	0.302	1	120	21833	1
Mn	55	837.663	ug/L	3.264	0	851	14317910	0
Co	59	5.213	ug/L	0.080	1	76	69244	0
Ge	72		ug/L			436831	467080	2
Ni	60	12.334	ug/L	0.238	1	19	34922	1
Ni	62	13.842	ug/L	0.630	4	34	5539	2
Cu	63	14.220	ug/L	0.289	2	79	90429	0
Cu	65	14.764	ug/L	0.618	4	33	42404	1
Zn	66	240.953	ug/L	10.853	4	137	407559	2
Zn	67	244.879	ug/L	9.764	3	26	67516	1
Zn	68	244.144	ug/L	11.243	4	127	297073	2
As	75	8.166	ug/L	0.228	2	255	13149	1
As-1	75	7.988	ug/L	0.432	5	8509	21677	0
Se	82	-0.020	ug/L	0.021	107	6	3	116
Se	78	-0.520	ug/L	0.767	147	8644	9011	1
Mo	98	0.304	ug/L	0.008	2	14	1392	1
Y	89		ug/L			278872	382556	2
Kr	83		ug/L			509	638	3
In	115		ug/L			878990	932293	1
Ag	107	0.114	ug/L	0.002	1	24	1503	0
Cd	111	3.707	ug/L	0.060	1	66	16890	0
Cd	114	3.640	ug/L	0.056	1	45	41119	0
Sb	121	0.131	ug/L	0.010	8	270	2169	5
Sb	123	0.127	ug/L	0.005	4	194	1606	2
Ba	135	303.026	ug/L	9.111	3	45	1224615	1
Ba	137	306.875	ug/L	7.056	2	76	2141768	0
Tb	159		ug/L			958896	1035263	0
Tl	205	0.214	ug/L	0.002	0	228	6646	0
Pb	208	205.749	ug/L	1.900	0	272	8101184	0
Bi	209		ug/L			2065247	2134599	0
Th	232	4.645	ug/L	0.090	1	1210	175742	1
U	238	0.805	ug/L	0.009	1	68	30812	1

ICP-MS Quantitative Analysis - Summary Report

rr Be, Ag, V, Cr, Mn
Co, Pb, Zn

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	646477	3
	Be	9	0.932	ug/L	0.043	4	9	1873	2
	C	13		ug/L			57054	98603	4
	Cl	37		ug/L			3021538	3224780	0
>	Sc	45		ug/L			603049	750911	2
	V	51	33.294	ug/L	1.208	3	5204	528624	3
	V-1	51	33.698	ug/L	0.653	1	161	528316	2
	Cr	52	92.999	ug/L	2.685	2	15338	1282990	2
	Cr	53	94.463	ug/L	1.595	1	120	144879	0
	Mn	55	1524.642	ug/L	46.532	3	851	28571568	2
	Co	59	19.177	ug/L	0.403	2	76	279089	1
>	Ge	72		ug/L			436831	451107	1
	Ni	60	92.638	ug/L	1.200	1	19	253228	0
	Ni	62	93.787	ug/L	2.822	3	34	36063	1
	Cu	63	42.354	ug/L	0.860	2	79	260014	1
	Cu	65	43.499	ug/L	0.894	2	33	120654	0
	Zn	66	440.674	ug/L	5.192	1	137	720209	0
	Zn	67	447.020	ug/L	13.866	3	26	119054	1
	Zn	68	457.059	ug/L	3.905	0	127	537365	0
	As	75	16.823	ug/L	0.488	2	255	25886	1
	As-1	75	16.711	ug/L	0.581	3	8509	34215	1
	Se	82	< 0.128	ug/L	0.032	24	6	27	19
	Se	78	0.127	ug/L	0.410	323	8644	8978	0
	Mo	98	0.606	ug/L	0.015	2	14	2667	1
	Y	89		ug/L			278872	450914	1
	Kr	83		ug/L			509	769	3
>	In	115		ug/L			878990	934601	0
	Ag	107	0.224	ug/L	0.004	1	24	2949	1
	Cd	111	6.628	ug/L	0.087	1	66	30219	0
	Cd	114	6.528	ug/L	0.103	1	45	73900	1
	Sb	121	< 0.057	ug/L	0.001	1	270	1111	1
	Sb	123	0.058	ug/L	0.002	2	194	849	2
	Ba	135	763.747	ug/L	10.518	1	45	3094871	1
	Ba	137	751.426	ug/L	17.620	2	76	5258251	2
>	Tb	159		ug/L			958896	1065150	1
	Tl	205	0.514	ug/L	0 010	1	228	16019	1
	Pb	208	336.315	ug/L	10.101	3	272	13619865	1
	Bi	209		ug/L			2065247	2028719	3
	Th	232	6.409	ug/L	0.199	3	1210	248873	1
	U	238	0.858	ug/L	0.009	1	68	33796	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:54:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			617808	631661	2
	Be	9	54.749	ug/L	2.119	3	9	107112	2
	C	13		ug/L			57054	57197	1
	Cl	37		ug/L			3021538	3177310	3
>	Sc	45		ug/L			603049	641952	0
	V	51	49.115	ug/L	0.418	0	5204	664117	0
	V-1	51	49.603	ug/L	0.591	1	161	664793	0
	Cr	52	48.946	ug/L	1.833	3	15338	585098	3
	Cr	53	50.541	ug/L	2.364	4	120	66332	4
	Mn	55	49.834	ug/L	1.601	3	851	799414	2
	Co	59	48.840	ug/L	1.797	3	76	607560	3
>	Ge	72		ug/L			436831	458837	1
	Ni	60	47.678	ug/L	0.554	1	19	132588	1
	Ni	62	47.840	ug/L	0.059	0	34	18733	1
	Cu	63	48.978	ug/L	0.830	1	79	305830	0
	Cu	65	49.095	ug/L	0.960	1	33	138509	0
	Zn	66	48.981	ug/L	1.178	2	137	81545	1
	Zn	67	50.733	ug/L	0 487	0	26	13771	0
	Zn	68	49.222	ug/L	0.824	1	127	58979	0
	As	75	48.704	ug/L	0.630	1	255	75731	0
	As-1	75	48.834	ug/L	0.658	1	8509	84533	0
	Se	82	49.158	ug/L	0.885	1	6	8299	1
	Se	78	49.596	ug/L	0.832	1	8644	30277	0
	Mo	98	43.133	ug/L	1.389	3	14	192141	3
	Y	89		ug/L			278872	300031	1
	Kr	83		ug/L			509	539	4
>	In	115		ug/L			878990	882555	1
	Ag	107	41.848	ug/L	0.960	2	24	515078	1
	Cd	111	49.818	ug/L	0.634	1	66	214067	1
	Cd	114	50.328	ug/L	0.456	0	45	537654	0
	Sb	121	50.318	ug/L	1.319	2	270	686362	1
	Sb	123	49.645	ug/L	0.225	0	194	519051	0
	Ba	135	49.602	ug/L	0.732	1	45	189830	0
	Ba	137	49.840	ug/L	0 986	1	76	329387	1
>	Tb	159		ug/L			958896	997391	1
	Tl	205	51.078	ug/L	0.841	1	228	1468619	0
	Pb	208	50.177	ug/L	0.907	1	272	1903417	0
	Bi	209		ug/L			2065247	2011965	3
	Th	232	51.028	ug/L	1.090	2	1210	1847186	0
	U	238	52.810	ug/L	1.067	2	68	1943189	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:01:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			617808	610503 ✓	2
Be	9	-0.002	ug/L	0.002	124	9	5	71
C	13		ug/L			57054	57517	1
Cl	37		ug/L			3021538	3066212	1
Sc	45		ug/L			603049	604213 ✓	0
V	51	0.004	ug/L	0.015	425	5204	5259	3
V-1	51	-0.004	ug/L	0.001	24	161	110	11
Cr	52	0.013	ug/L	0.045	347	15338	15510	3
Cr	53	-0.012	ug/L	0.008	67	120	106	9
Mn	55	-0.025	ug/L	0.010	42	851	482	32
Co	59	0.000	ug/L	0.002	606	76	80	31
Ge	72		ug/L			436831	432422 ✓	1
Ni	60	0.004	ug/L	0.004	102	19	30	35
Ni	62	0.012	ug/L	0.012	103	34	38	10
Cu	63	0.001	ug/L	0.002	179	79	86	15
Cu	65	0.001	ug/L	0.002	166	33	36	14
Zn	66	0.011	ug/L	0.010	87	137	152	8
Zn	67	-0.004	ug/L	0.006	147	26	25	4
Zn	68	0.017	ug/L	0.009	52	127	144	5
As	75	-0.002	ug/L	0.017	725	255	249	10
As-1	75	0.171	ug/L	0.066	38	8509	8673	1
Se	82	-0.069	ug/L	0.036	51	6	-4	116
Se	78	0.619	ug/L	0.220	35	8644	8805	0
Mo	98	0.007	ug/L	0 002	24	14	44	15
Y	89		ug/L			278872	285995	2
Kr	83		ug/L			509	536	2
In	115		ug/L			878990	868994 ✓	1
Ag	107	0.001	ug/L	0.001	131	24	37	44
Cd	111	0.002	ug/L	0.001	53	66	73	5
Cd	114	0.001	ug/L	0.001	108	45	52	14
Sb	121	0.039	ug/L	0.008	19	270	786	11
Sb	123	0.042	ug/L	0.007	16	194	622	9
Ba	135	0.005	ug/L	0.009	161	45	65	48
Ba	137	0.006	ug/L	0.011	173	76	116	60
Tb	159		ug/L			958896	938191 ✓	0
Tl	205	-0.002	ug/L	0.002	113	228	163	40
Pb	208	0.002	ug/L	0.006	266	272	343	58
Bi	209		ug/L			2065247	1974704	1
Th	232	0.064	ug/L	0.001	1	1210	3355	0
U	238	0.001	ug/L	0.002	222	68	97	68

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
ZZ		ZZZZZZ			Sc high
		ICSAB			^{62}Ni high
		LR200			Ag, Mo high
		LR300			
		B1			
		B2			
		ICSA			
		B3			
		CCV2			Mo, Ag high
		CCB2			
		VR32 MB1	SWN	20	Be
		↓ MB1SPK	↓	↓ ✓	↓

Analytical Resources, Incorporated
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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 2 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 E	SWN	20	Be
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV3			
		CCB3			
		VR32 A-L	SWN	100	Be rr Ag
		A		20	
		ADUP			
		ASPK			
		B			
		C			
		D			
		E		100	V, Cr, Co
		F		20	Be; rr Ag
		G			
		CCV4			
		CCB4			
		VR33 MBI	SWN	20	Be; rr Ag
		MBISPK			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 3 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR32 1t	SWN	20	Be; rr Ag
		I			
		J			
		K			
		L		100	Pb Zn ; rr V, Cr, Co
		L		20	Be; rr Ag
		VR33 B			
		C			
		CCV5			Sc high
		CCB5			
		VR33 A-L	SWN	500 ✓	Pb Zn
		A		100	
		ADUP		✓	
		ASPK			
		C			rr V, Cr, Co
		E			Zn
		I		20	Be; rr Ag
		J		100	Pb Zn
		J		20	Be; rr Ag
		VR32 E			
		CCV6			Sc high, Co low
		CCB6			
		VR34 MB1	SWN	20	Be; rr Ag
		MB1SPK		L	

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, November 16, 2012 11:38:53
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1285
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3189.9	3189.877	19.383	0.6	Standard
	Mg	24.0	31573.0	31573.041	443.254	1.4	Standard
	In	114.9	68795.9	68795.880	429.402	0.6	Standard
	Pb	208.0	30196.8	30196.814	219.529	0.7	Standard
	U	238.1	53059.5	53059.527	481.866	0.9	Standard
⌈	CeO	155.9	1437.3	0.021	0.000	2.3	Standard
| >	Ce	139.9	69221.8	69221.779	197.514	0.3	Standard
⌊	Ce++	70.0	733.0	0.011	0.000	1.4	Standard
	Bkgd	220.0	0.2	0.167	0.118	70.7	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/16/2012 11:38:51 AM
l Time: 11/16/2012 11:41:27 AM

ly Performance Check - [Passed] Optimum value(s): N/A
    Obtained Intensity (Be 9.0122): 3189.88
    Obtained Intensity (Mg 23.985): 31573.04
    Obtained Intensity (In 114.904): 68795.88
    Obtained Intensity (Pb 207.977): 30196.81
    Obtained Intensity (U 238.05): 53059.53
    Obtained Intensity (Bkgd 220): 0.17
    Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1437.32 / 69221.78)
    Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=733.03 / 69221.78)

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

rt Time: 11/16/2012 11:00:20 AM
Time: 11/16/2012 11:03:02 AM

s Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.711)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.702)

SmartTune Wizard - Summary

imization Summary

rtTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

.rt Time: 11/16/2012 11:04:18 AM
| Time: 11/16/2012 11:08:29 AM

oLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.999; Intercept = -10.68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:45:47
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				681751	0
	Be	9		ug/L				8	24
	C	13		ug/L				63994	1
	Cl	37		ug/L				3532807	0
>	Sc	45		ug/L				674505	2
	V	51		ug/L				6013	1
	V-1	51		ug/L				387	3
	Cr	52		ug/L				17778	2
	Cr	53		ug/L				210	7
	Mn	55		ug/L				314	2
	Co	59		ug/L				73	20
>	Ge	72		ug/L				426798	1
	Ni	60		ug/L				26	10
	Ni	62		ug/L				48	17
	Cu	63		ug/L				88	30
	Cu	65		ug/L				42	20
	Zn	66		ug/L				141	4
	Zn	67		ug/L				21	9
	Zn	68		ug/L				144	11
	As	75		ug/L				220	2
	As-1	75		ug/L				9153	0
	Se	82		ug/L				-1	888
	Se	78		ug/L				9315	0
	Mo	98		ug/L				35	11
	Y	89		ug/L				271155	0
	Kr	83		ug/L				529	5
>	In	115		ug/L				840042	0
	Ag	107		ug/L				32	23
	Cd	111		ug/L				72	14
	Cd	114		ug/L				44	20
	Sb	121		ug/L				346	17
	Sb	123		ug/L				257	13
	Ba	135		ug/L				17	24
	Ba	137		ug/L				19	9
>	Tb	159		ug/L				1001666	0
	Tl	205		ug/L				206	31
	Pb	208		ug/L				157	11
	Bi	209		ug/L				2293546	0
	Th	232		ug/L				1512	1
	U	238		ug/L				29	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:49:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	678848	1
	Be	9	0.200	ug/L	0.006	2	8	505	1
	C	13		ug/L			63994	65432	1
	Cl	37		ug/L			3532807	3545982	3
>	Sc	45		ug/L			674505	680274	0
	V	51	0.200	ug/L	0.021	10	6013	8785	3
	V-1	51	0.200	ug/L	0.003	1	387	3194	1
	Cr	52	0.500	ug/L	0.037	7	17778	23649	2
	Cr	53	0.500	ug/L	0.036	7	210	884	5
	Mn	55	0.500	ug/L	0.007	1	314	8394	1
	Co	59	0.200	ug/L	0.007	3	73	2642	3
>	Ge	72		ug/L			426798	428590	0
	Ni	60	0.500	ug/L	0.022	4	26	1458	3
	Ni	62	0.500	ug/L	0.050	9	48	231	7
	Cu	63	0.500	ug/L	0.013	2	88	3319	2
	Cu	65	0.500	ug/L	0.008	1	42	1474	1
	Zn	66	4.000	ug/L	0.038	0	141	6841	0
	Zn	67	4.000	ug/L	0.194	4	21	1040	4
	Zn	68	4.000	ug/L	0.111	2	144	4849	3
	As	75	0.200	ug/L	0.007	3	220	539	1
	As-1	75	0.200	ug/L	0.070	35	9153	9376	0
	Se	82	0.500	ug/L	0.010	2	-1	87	2
	Se	78	0.500	ug/L	0.258	51	9315	9443	0
	Mo	98	0.200	ug/L	0.015	7	35	777	7
	Y	89		ug/L			271155	271780	1
	Kr	83		ug/L			529	523	1
>	In	115		ug/L			840042	841036	0
	Ag	107	0.200	ug/L	0.006	3	32	2472	2
	Cd	111	0.100	ug/L	0.006	6	72	514	5
	Cd	114	0.100	ug/L	0.004	4	44	1157	3
	Sb	121	0.200	ug/L	0.004	1	346	2773	1
	Sb	123	0.200	ug/L	0.005	2	257	2116	1
	Ba	135	0.500	ug/L	0.016	3	17	1922	2
	Ba	137	0.500	ug/L	0.003	0	19	3256	0
>	Tb	159		ug/L			1001666	1004484	0
	Tl	205	0.200	ug/L	0.004	1	206	6732	1
	Pb	208	0.100	ug/L	0.002	1	157	4576	2
	Bi	209		ug/L			2293546	2285482	0
	Th	232	0.200	ug/L	0.007	3	1512	7425	3
	U	238	0.200	ug/L	0.000	0	29	8335	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:54:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	690004	1
	Be	**9**	**10.000**	ug/L	0.218	2	8	24663	0
	C	**13**		ug/L			63994	64386	2
	Cl	**37**		ug/L			3532807	3627720	2
>	**Sc**	**45**		ug/L			674505	693621	0
	V	**51**	**10.000**	ug/L	0.128	1	6013	140550	1
	V-1	**51**	**10.000**	ug/L	0.110	1	387	135671	0
	Cr	**52**	**10.000**	ug/L	0.094	0	17778	136788	1
	Cr	**53**	**10.000**	ug/L	0.185	1	210	13896	1
	Mn	**55**	**10.000**	ug/L	0.186	1	314	164566	1
	Co	**59**	**10.000**	ug/L	0.235	2	73	126725	1
>	**Ge**	**72**		ug/L			426798	436937	1
	Ni	**60**	**9.999**	ug/L	0.243	2	26	27972	3
	Ni	**62**	**10.001**	ug/L	0.238	2	48	4001	1
	Cu	**63**	**9.999**	ug/L	0.076	0	88	63348	0
	Cu	**65**	**9.999**	ug/L	0.123	1	42	28630	0
	Zn	**66**	**9.982**	ug/L	0.152	1	141	17000	1
	Zn	**67**	**10.082**	ug/L	0.082	0	21	2783	0
	Zn	**68**	**10.020**	ug/L	0.111	1	144	12319	2
	As	**75**	**10.000**	ug/L	0.134	1	220	15204	0
	As-1	**75**	**10.001**	ug/L	0.223	2	9153	24303	0
	Se	**82**	**9.997**	ug/L	0.250	2	-1	1656	1
	Se	**78**	**10.014**	ug/L	0.607	6	9315	13704	0
	Mo	**98**	**10.000**	ug/L	0.111	1	35	38569	1
	Y	**89**		ug/L			271155	275843	1
	Kr	**83**		ug/L			529	544	4
>	**In**	**115**		ug/L			840042	854316	0
	Ag	**107**	**10.000**	ug/L	0.211	2	32	116515	1
	Cd	**111**	**10.000**	ug/L	0.116	1	72	44007	1
	Cd	**114**	**10.000**	ug/L	0.068	0	44	108341	0
	Sb	**121**	**10.000**	ug/L	0.047	0	346	131416	0
	Sb	**123**	**10.000**	ug/L	0.084	0	257	100706	0
	Ba	**135**	**9.999**	ug/L	0.076	0	17	37726	0
	Ba	**137**	**10.000**	ug/L	0.123	1	19	65463	1
>	**Tb**	**159**		ug/L			1001666	1032266	0
	Tl	**205**	**10.000**	ug/L	0.109	1	206	316714	1
	Pb	**208**	**10.000**	ug/L	0.053	0	157	416417	0
	Bi	**209**		ug/L			2293546	2310164	0
	Th	**232**	**10.001**	ug/L	0.104	1	1512	373350	0
	U	**238**	**10.000**	ug/L	0.196	1	29	410875	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:58:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	698058	0
	Be	**9**	**19.939**	ug/L	0.303	1	8	49153	1
	C	**13**		ug/L			63994	63964	2
	Cl	**37**		ug/L			3532807	3597639	2
>	**Sc**	**45**		ug/L			674505	700457	1
	V	**51**	**20.040**	ug/L	0.645	3	6013	280327	3
	V-1	**51**	**20.030**	ug/L	0.714	3	387	275688	3
	Cr	**52**	**19.982**	ug/L	0.255	1	17778	256694	1
	Cr	**53**	**19.952**	ug/L	0.175	0	210	27523	0
	Mn	**55**	**19.941**	ug/L	0.295	1	314	327267	2
	Co	**59**	**19.906**	ug/L	0.351	1	73	250003	0
>	**Ge**	**72**		ug/L			426798	434992	0
	Ni	**60**	**19.853**	ug/L	0.104	0	26	53689	1
	Ni	**62**	**19.969**	ug/L	0.298	1	48	7857	1
	Cu	**63**	**20.002**	ug/L	0.387	1	88	126105	1
	Cu	**65**	**20.025**	ug/L	0.383	1	42	57316	1
	Zn	**66**	**19.910**	ug/L	0.244	1	141	33099	0
	Zn	**67**	**20.070**	ug/L	0.530	2	21	5560	2
	Zn	**68**	**19.906**	ug/L	0.272	1	144	23832	0
	As	**75**	**19.990**	ug/L	0.017	0	220	29980	0
	As-1	**75**	**20.000**	ug/L	0.021	0	9153	39065	0
	Se	**82**	**19.974**	ug/L	0.346	1	-1	3279	1
	Se	**78**	**20.016**	ug/L	0.207	1	9315	17816	0
	Mo	**98**	**20.020**	ug/L	0.203	1	35	77142	0
	Y	**89**		ug/L			271155	277399	0
	Kr	**83**		ug/L			529	550	5
>	**In**	**115**		ug/L			840042	848651	2
	Ag	**107**	**20.042**	ug/L	0.625	3	32	233848	2
	Cd	**111**	**19.950**	ug/L	0.396	1	72	86245	0
	Cd	**114**	**19.942**	ug/L	0.353	1	44	212106	1
	Sb	**121**	**20.006**	ug/L	0.450	2	346	261036	0
	Sb	**123**	**19.982**	ug/L	0.463	2	257	198873	0
	Ba	**135**	**20.031**	ug/L	0.302	1	17	75514	0
	Ba	**137**	**20.028**	ug/L	0.375	1	19	130917	0
>	**Tb**	**159**		ug/L			1001666	1019517	1
	Tl	**205**	**20.014**	ug/L	0.262	1	206	627640	1
	Pb	**208**	**19.999**	ug/L	0.296	1	157	822129	0
	Bi	**209**		ug/L			2293546	2269096	0
	Th	**232**	**20.089**	ug/L	0.319	1	1512	752562	0
	U	**238**	**19.998**	ug/L	0.323	1	29	811192	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:03:00
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	689998	1
	Be	9	49.998	ug/L	0.961	1	8	121778	1
	C	13		ug/L			63994	64041	1
	Cl	37		ug/L			3532807	3745894	1
>	Sc	45		ug/L			674505	693960	0
	V	51	49.986	ug/L	1.203	2	6013	682651	2
	V-1	51	49.965	ug/L	0.712	1	387	678427	1
	Cr	52	49.987	ug/L	0.103	0	17778	608024	0
	Cr	53	49.919	ug/L	1.695	3	210	67355	3
	Mn	55	50.101	ug/L	1.217	2	314	822363	2
	Co	59	50.046	ug/L	0.343	0	73	625531	0
>	Ge	72		ug/L			426798	430617	0
	Ni	60	50.060	ug/L	2.045	4	26	134751	3
	Ni	62	49.968	ug/L	0.902	1	48	19326	1
	Cu	63	49.841	ug/L	0.494	0	88	306080	0
	Cu	65	49.832	ug/L	1.118	2	42	138811	2
	Zn	66	49.889	ug/L	0.959	1	141	81025	1
	Zn	67	49.847	ug/L	0.368	0	21	13442	0
	Zn	68	49.849	ug/L	1.244	2	144	58013	2
	As	75	49.977	ug/L	0.844	1	220	73688	1
	As-1	75	49.982	ug/L	0.781	1	9153	82661	1
	Se	82	49.897	ug/L	0.564	1	-1	8029	0
	Se	78	49.914	ug/L	0.641	1	9315	29769	0
	Mo	98	49.990	ug/L	0.682	1	35	190442	0
	Y	89		ug/L			271155	273448	1
	Kr	83		ug/L			529	549	7
>	In	115		ug/L			840042	823819	0
	Ag	107	49.775	ug/L	1.011	2	32	551472	1
	Cd	111	50.015	ug/L	0.224	0	72	210156	0
	Cd	114	50.070	ug/L	0.284	0	44	520620	0
	Sb	121	50.143	ug/L	0.183	0	346	643993	0
	Sb	123	50.076	ug/L	0.188	0	257	487265	0
	Ba	135	50.167	ug/L	0.125	0	17	186719	0
	Ba	137	50.132	ug/L	0.216	0	19	322401	0
>	Tb	159		ug/L			1001666	1004937	0
	Tl	205	49.952	ug/L	0.667	1	206	1536310	0
	Pb	208	49.980	ug/L	0.557	1	157	2021099	0
	Bi	209		ug/L			2293546	2197296	0
	Th	232	50.210	ug/L	0.647	1	1512	1891500	0
	U	238	50.469	ug/L	0.511	1	29	2117328	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:09:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	668251	1
	Be	9	99.918	ug/L	1.781	1	8	235086	2
	C	13		ug/L			63994	64099	3
	Cl	37		ug/L			3532807	3711465	0
>	Sc	45		ug/L			674505	677060	1
	V	51	100.456	ug/L	1.993	1	6013	1352528	0
	V-1	51	100.617	ug/L	1.806	1	387	1360181	0
	Cr	52	100.191	ug/L	2.506	2	17778	1178123	0
	Cr	53	100.716	ug/L	2.527	2	210	135575	1
	Mn	55	99.879	ug/L	1.927	1	314	1592528	0
	Co	59	100.079	ug/L	1.965	1	73	1223369	1
>	Ge	72		ug/L			426798	422829	2
	Ni	60	99.908	ug/L	3.597	3	26	263133	1
	Ni	62	99.696	ug/L	2.242	2	48	37425	0
	Cu	63	99.436	ug/L	4.016	4	88	588131	2
	Cu	65	99.133	ug/L	2.521	2	42	263400	0
	Zn	66	99.077	ug/L	4.016	4	141	153081	1
	Zn	67	99.572	ug/L	1.823	1	21	25975	2
	Zn	68	99.395	ug/L	4.037	4	144	111148	1
	As	75	99.721	ug/L	3.049	3	220	142770	0
	As-1	75	99.837	ug/L	3.004	3	9153	152243	0
	Se	82	99.780	ug/L	3.025	3	-1	15647	1
	Se	78	100.209	ug/L	2.886	2	9315	49652	1
	Mo	98	99.944	ug/L	2.718	2	35	372988	0
	Y	89		ug/L			271155	272249	0
	Kr	83		ug/L			529	597	2
>	In	115		ug/L			840042	814550	0
	Ag	107	99.079	ug/L	3.173	3	32	1053014	3
	Cd	111	99.293	ug/L	0.142	0	72	402968	0
	Cd	114	99.414	ug/L	1.144	1	44	1002463	1
	Sb	121	99.528	ug/L	0.112	0	346	1243952	0
	Sb	123	99.597	ug/L	0.827	0	257	945268	0
	Ba	135	99.865	ug/L	1.141	1	17	365838	1
	Ba	137	99.897	ug/L	0.104	0	19	633031	0
>	Tb	159		ug/L			1001666	996124	0
	Tl	205	100.694	ug/L	0.444	0	206	3142546	0
	Pb	208	99.851	ug/L	0.952	0	157	3982796	1
	Bi	209		ug/L			2293546	2133650	0
	Th	232	100.783	ug/L	0.381	0	1512	3862786	0
	U	238	99.667	ug/L	0.511	0	29	4099300	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:16:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	662492	2
	Be	9	0.005	ug/L	0.005	118	8	19	64
	C	13		ug/L			63994	63519	1
	Cl	37		ug/L			3532807	3610386	2
>	Sc	45		ug/L			674505	676674	0
	V	51	0.019	ug/L	0.017	87	6013	6286	4
	V-1	51	-0.012	ug/L	0.010	79	387	228	57
	Cr	52	0.057	ug/L	0.043	75	17778	18493	3
	Cr	53	-0.043	ug/L	0.016	37	210	152	14
	Mn	55	0.005	ug/L	0.009	176	314	395	35
	Co	59	0.005	ug/L	0.006	127	73	129	55
>	Ge	72		ug/L			426798	420811	0
	Ni	60	0.004	ug/L	0.010	249	26	35	69
	Ni	62	0.144	ug/L	0.074	51	48	101	26
	Cu	63	0.013	ug/L	0.009	71	88	162	32
	Cu	65	0.001	ug/L	0.006	755	42	43	33
	Zn	66	-0.002	ug/L	0.008	465	141	137	8
	Zn	67	0.002	ug/L	0.005	196	21	21	5
	Zn	68	-0.007	ug/L	0.011	144	144	133	8
	As	75	0.006	ug/L	0.008	132	220	226	4
	As-1	75	0.101	ug/L	0.092	91	9153	9168	0
	Se	82	-0.096	ug/L	0.015	15	-1	-16	14
	Se	78	0.314	ug/L	0.339	107	9315	9310	0
	Mo	98	0.011	ug/L	0.002	18	35	76	9
	Y	89		ug/L			271155	269348	1
	Kr	83		ug/L			529	559	2
>	In	115		ug/L			840042	811042	0
	Ag	107	0.003	ug/L	0.001	19	32	63	10
	Cd	111	0.002	ug/L	0.003	145	72	79	17
	Cd	114	0.000	ug/L	0.001	1167	44	44	27
	Sb	121	0.097	ug/L	0.014	14	346	1538	11
	Sb	123	0.096	ug/L	0.016	16	257	1150	12
	Ba	135	0.001	ug/L	0.000	29	17	21	7
	Ba	137	0.002	ug/L	0.001	28	19	31	12
>	Tb	159		ug/L			1001666	975555	0
	Tl	205	0.021	ug/L	0.014	64	206	855	50
	Pb	208	0.001	ug/L	0.000	52	157	178	7
	Bi	209		ug/L			2293546	2236453	0
	Th	232	0.141	ug/L	0.008	5	1512	6770	3
	U	238	0.003	ug/L	0.001	20	29	135	16

Sample Information

Sample Date/Time: Friday, November 16, 2012 15:16:05
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**0.9999**	0.020	0.20	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.024	0.50	10	20	50	100
Co	59	**1.0000**	0.018	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9998**	0.013	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.038	0.20	10	20	50	100
U	238	**0.9999**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:22:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690403	1
	Be	9	49.894	ug/L	0.683	1	8	121266	0
	C	13		ug/L			63994	67900	1
	Cl	37		ug/L			3532807	3629687	1
>	Sc	45		ug/L			674505	703247	3
	V	51	50.500	ug/L	1.863	3	6013	708946	0
	V-1	51	49.902	ug/L	1.813	3	387	700498	0
	Cr	52	50.060	ug/L	2.314	4	17778	620285	1
	Cr	53	48.148	ug/L	2.038	4	210	67390	1
	Mn	55	49.794	ug/L	1.291	2	314	824536	0
	Co	59	48.896	ug/L	2.188	4	73	620443	2
>	Ge	72		ug/L			426798	430337	2
	Ni	60	50.592	ug/L	1.016	2	26	135669	1
	Ni	62	51.298	ug/L	2.083	4	48	19620	2
	Cu	63	52.276	ug/L	1.815	3	88	314756	1
	Cu	65	51.776	ug/L	1.199	2	42	140046	0
	Zn	66	50.777	ug/L	1.532	3	141	79933	0
	Zn	67	50.427	ug/L	2.276	4	21	13396	4
	Zn	68	49.844	ug/L	1.986	3	144	56807	2
	As	75	50.549	ug/L	1.471	2	220	73772	1
	As-1	75	50.988	ug/L	1.471	2	9153	83651	0
	Se	82	78.668	ug/L	2.053	2	-1	12555	0
	Se	78	79.902	ug/L	2.563	3	9315	42195	0
	Mo	98	49.610	ug/L	1.562	3	35	188439	1
	Y	89		ug/L			271155	275646	0
	Kr	83		ug/L			529	583	3
>	In	115		ug/L			840042	834912	0
	Ag	107	51.441	ug/L	1.082	2	32	560341	1
	Cd	111	49.654	ug/L	0.553	1	72	206580	1
	Cd	114	49.377	ug/L	0.518	1	44	510376	1
	Sb	121	49.211	ug/L	0.599	1	346	630579	0
	Sb	123	48.980	ug/L	0.378	0	257	476612	0
	Ba	135	50.077	ug/L	0.916	1	17	188036	1
	Ba	137	50.168	ug/L	0.843	1	19	325859	1
>	Tb	159		ug/L			1001666	1011851	0
	Tl	205	49.611	ug/L	0.837	1	206	1572690	0
	Pb	208	50.170	ug/L	0.451	0	157	2032668	0
	Bi	209		ug/L			2293546	2203007	0
	Th	232	49.919	ug/L	0.372	0	1512	1944213	0
	U	238	52.546	ug/L	0.603	1	29	2195230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:29:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	684262	1
	Be	9	0.000	ug/L	0.002	1684	8	9	55
	C	13		ug/L			63994	62226	3
	Cl	37		ug/L			3532807	3528326	2
>	Sc	45		ug/L			674505	687249	1
	V	51	-0.005	ug/L	0.002	38	6013	6055	0
	V-1	51	-0.019	ug/L	0.001	5	387	139	9
	Cr	52	-0.022	ug/L	0.017	77	17778	17851	0
	Cr	53	-0.065	ug/L	0.016	24	210	125	16
	Mn	55	-0.001	ug/L	0.001	75	314	296	5
	Co	59	0.000	ug/L	0.000	161	73	76	5
>	Ge	72		ug/L			426798	425988	1
	Ni	60	-0.002	ug/L	0.003	129	26	20	32
	Ni	62	0.011	ug/L	0.031	285	48	52	22
	Cu	63	-0.000	ug/L	0.000	576	88	87	2
	Cu	65	-0.005	ug/L	0.002	50	42	29	20
	Zn	66	0.001	ug/L	0.002	149	141	143	2
	Zn	67	0.005	ug/L	0.003	58	21	22	2
	Zn	68	-0.019	ug/L	0.005	27	144	122	4
	As	75	0.034	ug/L	0.030	87	220	269	14
	As-1	75	0.066	ug/L	0.114	173	9153	9229	0
	Se	82	0.067	ug/L	0.096	142	-1	8	173
	Se	78	0.217	ug/L	0.404	185	9315	9384	0
	Mo	98	0.004	ug/L	0.003	84	35	49	21
	Y	89		ug/L			271155	270459	1
	Kr	83		ug/L			529	548	0
>	In	115		ug/L			840042	812126	0
	Ag	107	0.000	ug/L	0.001	11553	32	31	24
	Cd	111	0.001	ug/L	0.001	102	72	76	7
	Cd	114	0.000	ug/L	0.001	252	44	45	13
	Sb	121	0.019	ug/L	0.009	47	346	567	19
	Sb	123	0.019	ug/L	0.008	42	257	432	18
	Ba	135	-0.001	ug/L	0.002	189	17	13	42
	Ba	137	0.001	ug/L	0.001	151	19	23	32
>	Tb	159		ug/L			1001666	982567	0
	Tl	205	0.005	ug/L	0.005	112	206	346	47
	Pb	208	0.000	ug/L	0.000	193	157	159	4
	Bi	209		ug/L			2293546	2275284	0
	Th	232	0.066	ug/L	0.002	2	1512	3977	0
	U	238	0.001	ug/L	0.000	2	29	74	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:33:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683933	1
	Be	9	50.034	ug/L	0.841	1	8	120468	0
	C	13		ug/L			63994	66070	2
	Cl	37		ug/L			3532807	3775307	3
>	Sc	45		ug/L			674505	684426	1
	V	51	49.338	ug/L	1.329	2	6013	674609	1
	V-1	51	49.295	ug/L	1.561	3	387	673794	1
	Cr	52	49.891	ug/L	1.454	2	17778	602168	2
	Cr	53	49.736	ug/L	2.482	4	210	67784	4
	Mn	55	50.137	ug/L	1.332	2	314	808256	1
	Co	59	49.406	ug/L	0.759	1	73	610603	0
>	Ge	72		ug/L			426798	429799	2
	Ni	60	51.006	ug/L	0.994	1	26	136605	0
	Ni	62	50.622	ug/L	0.675	1	48	19349	3
	Cu	63	51.236	ug/L	1.610	3	88	308117	1
	Cu	65	51.013	ug/L	0.746	1	42	137848	2
	Zn	66	50.452	ug/L	1.096	2	141	79337	1
	Zn	67	50.153	ug/L	1.547	3	21	13305	1
	Zn	68	50.940	ug/L	1.570	3	144	58000	3
	As	75	50.901	ug/L	0.685	1	220	74206	0
	As-1	75	50.873	ug/L	0.866	1	9153	83393	0
	Se	82	50.956	ug/L	0 554	1	-1	8123	1
	Se	78	50.854	ug/L	1.354	2	9315	30234	0
	Mo	98	49.832	ug/L	1.144	2	35	189075	0
	Y	89		ug/L			271155	270557	1
	Kr	83		ug/L			529	565	2
>	In	115		ug/L			840042	822244	0
	Ag	107	48.502	ug/L	0.393	0	32	520362	0
	Cd	111	50.122	ug/L	0.655	1	72	205374	1
	Cd	114	50.866	ug/L	0.327	0	44	517780	0
	Sb	121	49.723	ug/L	0.297	0	346	627496	0
	Sb	123	50.142	ug/L	0.288	0	257	480514	0
	Ba	135	50.075	ug/L	0.722	1	17	185178	1
	Ba	137	49.887	ug/L	0.147	0	19	319117	0
>	Tb	159		ug/L			1001666	1007905	0
	Tl	205	48.340	ug/L	0.187	0	206	1526563	0
	Pb	208	49.413	ug/L	0.607	1	157	1994242	0
	Bi	209		ug/L			2293546	2190001	1
	Th	232	47.934	ug/L	0.611	1	1512	1859687	0
	U	238	48.673	ug/L	2.423	4	29	2025586	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:40:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	673285	2
	Be	9	0.001	ug/L	0.001	185	8	10	26
	C	13		ug/L			63994	63733	4
	Cl	37		ug/L			3532807	3619561	1
>	Sc	45		ug/L			674505	687411	1
	V	51	-0.024	ug/L	0.008	31	6013	5800	1
	V-1	51	-0.020	ug/L	0.000	2	387	127	5
	Cr	52	-0.078	ug/L	0.022	27	17778	17196	0
	Cr	53	-0.063	ug/L	0.007	10	210	128	7
	Mn	55	-0.001	ug/L	0.001	65	314	300	4
	Co	59	-0.000	ug/L	0.001	233	73	71	9
>	Ge	72		ug/L			426798	421158	0
	Ni	60	-0.002	ug/L	0.002	119	26	21	26
	Ni	62	0.032	ug/L	0.027	83	48	59	16
	Cu	63	-0.001	ug/L	0.002	172	88	81	11
	Cu	65	-0.005	ug/L	0.003	59	42	29	24
	Zn	66	-0.014	ug/L	0.002	12	141	119	2
	Zn	67	-0.010	ug/L	0.013	128	21	18	19
	Zn	68	-0.013	ug/L	0.007	54	144	128	5
	As	75	0.012	ug/L	0.010	81	220	234	5
	As-1	75	0.174	ug/L	0.094	54	9153	9280	1
	Se	82	-0.053	ug/L	0.063	120	-1	-10	98
	Se	78	0.598	ug/L	0.284	47	9315	9433	1
	Mo	98	0.008	ug/L	0.002	21	35	66	9
	Y	89		ug/L			271155	270665	0
	Kr	83		ug/L			529	561	3
>	In	115		ug/L			840042	820462	1
	Ag	107	0.000	ug/L	0.000	675	32	32	15
	Cd	111	0.001	ug/L	0.001	103	72	74	4
	Cd	114	-0.000	ug/L	0.001	124	44	38	15
	Sb	121	0.050	ug/L	0.007	13	346	964	9
	Sb	123	0.051	ug/L	0.011	22	257	734	14
	Ba	135	-0.002	ug/L	0.001	40	17	9	34
	Ba	137	0.001	ug/L	0.001	154	19	22	23
>	Tb	159		ug/L			1001666	981836	1
	Tl	205	0.008	ug/L	0.006	78	206	456	42
	Pb	208	0.000	ug/L	0.000	853	157	155	5
	Bi	209		ug/L			2293546	2243714	0
	Th	232	0.111	ug/L	0.011	9	1512	5693	8
	U	238	0.002	ug/L	0.000	17	29	89	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:44:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	700365 ✓	1
	Be	9	0.200	ug/L	0.008	3	8	501	3
	C	13		ug/L			63994	63447	4
	Cl	37		ug/L			3532807	3523565	1
>	Sc	45		ug/L			674505	688392	0
	V	51	0.194	ug/L	0.020	10	6013	8773	2
	V-1	51	0.187	ug/L	0.009	4	387	2959	3
	Cr	52	0.469	ug/L	0.021	4	17778	23665	0
	Cr	53	0.439	ug/L	0.035	7	210	815	6
	Mn	55	0.499	ug/L	0.014	2	314	8414	2
	Co	59	0.200	ug/L	0.003	1	73	2555	1
>	Ge	72		ug/L			426798	429033 ✓	1
	Ni	60	0.510	ug/L	0.011	2	26	1390	1
	Ni	62	0.453	ug/L	0.069	15	48	221	12
	Cu	63	0.528	ug/L	0.015	2	88	3258	3
	Cu	65	0.532	ug/L	0.009	1	42	1476	2
	Zn	66	4.322	ug/L	0.068	1	141	6915	0
	Zn	67	3.960	ug/L	0.228	5	21	1068	5
	Zn	68	4.216	ug/L	0.158	3	144	4923	1
	As	75	0.225	ug/L	0.017	7	220	548	5
	As-1	75	0.250	ug/L	0.055	22	9153	9564	0
	Se	82	0.495	ug/L	0.048	9	-1	76	10
	Se	78	0.600	ug/L	0.252	41	9315	9608	0
	Mo	98	0.191	ug/L	0 004	2	35	757	0
	Y	89		ug/L			271155	266536 ✓	0
	Kr	83		ug/L			529	542	2
>	In	115		ug/L			840042	828114 ✓	1
	Ag	107	0.203	ug/L	0.005	2	32	2226	3
	Cd	111	0.099	ug/L	0.006	6	72	480	5
	Cd	114	0.104	ug/L	0.002	1	44	1106	0
	Sb	121	0.189	ug/L	0.004	1	346	2744	0
	Sb	123	0.194	ug/L	0.001	0	257	2127	1
	Ba	135	0.492	ug/L	0.006	1	17	1848	2
	Ba	137	0.487	ug/L	0.005	1	19	3157	2
>	Tb	159		ug/L			1001666	982131 ✓	1
	Tl	205	0.205	ug/L	0.007	3	206	6503	2
	Pb	208	0.110	ug/L	0.002	1	157	4473	0
	Bi	209		ug/L			2293546	2274129	0
	Th	232	0.192	ug/L	0.002	0	1512	8735	1
	U	238	0.195	ug/L	0.000	0	29	7949	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICSA~~ 222222
Sample Dil Factor: 11.19.12 MJJ
Comments:
Sample Date/Time: Friday, November 16, 2012 15:48:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	709155	3
	Be	9	0.007	ug/L	0.002	38	8	25	25
	C	13		ug/L			63994	135711	1
	Cl	37		ug/L			3532807	10547836	1
>	Sc	45		ug/L			674505	851406	2
	V	51	0.142	ug/L	0.020	13	6013	9994	6
	V-1	51	1.444	ug/L	0.005	0	387	25034	2
	Cr	52	0.497	ug/L	0.032	6	17778	29679	1
	Cr	53	4.674	ug/L	0.093	1	210	8163	0
	Mn	55	0.064	ug/L	0.001	1	314	1683	2
	Co	59	0.025	ug/L	0.003	10	73	468	6
>	Ge	72		ug/L			426798	461713	1
	Ni	60	0.414	ug/L	0.010	2	26	1219	0
	Ni	62	4.588	ug/L	1.156	25	48	1934	25
	Cu	63	1.210	ug/L	0.101	8	88	7916	9
	Cu	65	0.430	ug/L	0.005	1	42	1292	1
	Zn	66	1.949	ug/L	0.016	0	141	3440	1
	Zn	67	7.846	ug/L	0.134	1	21	2255	0
	Zn	68	1.394	ug/L	0.064	4	144	1857	6
	As	75	0.063	ug/L	0.057	90	220	337	26
	As-1	75	0.467	ug/L	0.102	21	9153	10631	1
	Se	82	-0.333	ug/L	0.048	14	-1	-59	16
	Se	78	1.587	ug/L	0.552	34	9315	10775	1
	Mo	98	418.068	ug/L	8.534	2	35	1704184	2
	Y	89		ug/L			271155	295068	2
	Kr	83		ug/L			529	842	2
>	In	115		ug/L			840042	868906	2
	Ag	107	0.026	ug/L	0.002	7	32	330	8
	Cd	111	0.128	ug/L	0.010	7	72	630	7
	Cd	114	0.278	ug/L	0.011	3	44	3030	1
	Sb	121	0.074	ug/L	0.004	4	346	1344	5
	Sb	123	0.072	ug/L	0.002	2	257	999	1
	Ba	135	0.060	ug/L	0.004	7	17	251	5
	Ba	137	0.050	ug/L	0.004	7	19	359	8
>	Tb	159		ug/L			1001666	1055807	1
	Tl	205	0.042	ug/L	0.004	10	206	1614	9
	Pb	208	0.040	ug/L	0.001	3	157	1847	2
	Bi	209		ug/L			2293546	2177162	0
	Th	232	0.216	ug/L	0.103	47	1512	10361	39
	U	238	0.017	ug/L	0.001	4	29	778	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:55:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	651822	1
	Be	9	0.003	ug/L	0.002	48	8	15	20
	C	13		ug/L			63994	118709	0
	Cl	37		ug/L			3532807	9688038	3
>	Sc	45		ug/L			674505	684435	1
	V	51	0.098	ug/L	0.083	85	6013	7436	16
	V-1	51	1.418	ug/L	0.010	0	387	19773	1
	Cr	52	19.960	ug/L	0.107	0	17778	251769	1
	Cr	53	23.684	ug/L	0.311	1	210	32395	0
	Mn	55	19.365	ug/L	0.345	1	314	312395	0
	Co	59	18.880	ug/L	0.957	5	73	233300	3
>	Ge	72		ug/L			426798	405255	0
	Ni	60	20.012	ug/L	0.087	0	26	50564	0
	Ni	62	25.037	ug/L	1.339	5	48	9046	5
	Cu	63	20.880	ug/L	0.539	2	88	118492	2
	Cu	65	20.147	ug/L	0.121	0	42	51360	0
	Zn	66	19.841	ug/L	0.166	0	141	29507	0
	Zn	67	23.388	ug/L	0.399	1	21	5864	2
	Zn	68	18.588	ug/L	0.346	1	144	20044	1
	As	75	19.700	ug/L	0.319	1	220	27211	1
	As-1	75	20.002	ug/L	0.388	1	9153	36194	0
	Se	82	-0.434	ug/L	0.074	17	-1	-67	16
	Se	78	1.441	ug/L	0.255	17	9315	9402	0
	Mo	98	461.443	ug/L	2.033	0	35	1651065	0
	Y	89		ug/L			271155	268170	1
	Kr	83		ug/L			529	784	4
>	In	115		ug/L			840042	833177	1
	Ag	107	22.006	ug/L	0.580	2	32	239296	3
	Cd	111	19.695	ug/L	0.375	1	72	81799	0
	Cd	114	19.834	ug/L	0.482	2	44	204564	1
	Sb	121	0.049	ug/L	0.001	2	346	969	2
	Sb	123	0.053	ug/L	0.001	2	257	770	2
	Ba	135	0.052	ug/L	0.003	5	17	211	4
	Ba	137	0.039	ug/L	0.002	5	19	272	4
>	Tb	159		ug/L			1001666	1019512	0
	Tl	205	0.028	ug/L	0.001	4	206	1098	2
	Pb	208	0.037	ug/L	0.001	1	157	1674	1
	Bi	209		ug/L			2293546	2067717	3
	Th	232	0.039	ug/L	0.012	30	1512	3063	14
	U	238	-0.000	ug/L	0.000	251	29	26	34

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:02:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	643805	1
	Be	9	193.894	ug/L	4.482	2	8	439477	2
	C	13		ug/L			63994	64423	1
	Cl	37		ug/L			3532807	3718487	1
>	Sc	45		ug/L			674505	662247	1
	V	51	196.000	ug/L	1.534	0	6013	2575959	0
	V-1	51	193.120	ug/L	1.216	0	387	2553621	0
	Cr	52	194.948	ug/L	3.500	1	17778	2226056	0
	Cr	53	185.716	ug/L	2.916	1	210	244400	1
	Mn	55	190.415	ug/L	4.718	2	314	2969492	1
	Co	59	194.981	ug/L	3.209	1	73	2331691	1
>	Ge	72		ug/L			426798	388495	0
	Ni	60	198.627	ug/L	1.536	0	26	480895	0
	Ni	62	201.017	ug/L	2.367	1	48	69315	1
	Cu	63	198.612	ug/L	4.528	2	88	1079776	1
	Cu	65	201.635	ug/L	2.872	1	42	492433	1
	Zn	66	196.294	ug/L	3.256	1	141	278712	1
	Zn	67	196.592	ug/L	0.961	0	21	47106	1
	Zn	68	195.505	ug/L	3.953	2	144	200868	1
	As	75	204.100	ug/L	1.745	0	220	268392	0
	As-1	75	202.150	ug/L	1.334	0	9153	274813	0
	Se	82	202.844	ug/L	2.766	1	-1	29239	0
	Se	78	196.236	ug/L	3.291	1	9315	81240	1
	Mo	98	233.412	ug/L	4.275	1	35	800579	1
	Y	89		ug/L			271155	256233	1
	Kr	83		ug/L			529	733	3
>	In	115		ug/L			840042	799590	1
	Ag	107	224.823	ug/L	2.878	1	32	2345216	0
	Cd	111	198.829	ug/L	2.951	1	72	791957	1
	Cd	114	197.765	ug/L	2.156	1	44	1957303	0
	Sb	121	208.240	ug/L	5.536	2	346	2553825	1
	Sb	123	203.263	ug/L	3.448	1	257	1893203	1
	Ba	135	201.609	ug/L	3.063	1	17	724908	1
	Ba	137	204.341	ug/L	3.038	1	19	1270873	0
>	Tb	159		ug/L			1001666	987852	0
	Tl	205	198.892	ug/L	1.163	0	206	6155371	0
	Pb	208	197.398	ug/L	1.403	0	157	7807810	0
	Bi	209		ug/L			2293546	1922412	0
	Th	232	198.818	ug/L	0.973	0	1512	7555419	0
	U	238	196.618	ug/L	1.482	0	29	8019500	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:09:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	625649	1
	Be	9	292.016	ug/L	6.005	2	8	643146	1
	C	13		ug/L			63994	66112	0
	Cl	37		ug/L			3532807	3720039	0
>	Sc	45		ug/L			674505	631164	0
	V	51	306.509	ug/L	4.669	1	6013	3835950	0
	V-1	51	303.265	ug/L	5.141	1	387	3821385	0
	Cr	52	304.815	ug/L	2.717	0	17778	3308106	0
	Cr	53	294.426	ug/L	3.566	1	210	369158	0
	Mn	55	301.532	ug/L	4.866	1	314	4481781	0
	Co	59	302.091	ug/L	2.656	0	73	3442831	0
>	Ge	72		ug/L			426798	382426	0
	Ni	60	296.776	ug/L	1.325	0	26	707324	1
	Ni	62	304.019	ug/L	1.773	0	48	103168	0
	Cu	63	290.623	ug/L	5.679	1	88	1555269	1
	Cu	65	294.523	ug/L	1.468	0	42	707976	0
	Zn	66	282.879	ug/L	3.139	1	141	395309	0
	Zn	67	287.842	ug/L	0.602	0	21	67884	0
	Zn	68	278.979	ug/L	4.208	1	144	282121	2
	As	75	301.941	ug/L	4.616	1	220	390744	1
	As-1	75	302.646	ug/L	4.440	1	9153	400915	0
	Se	82	286.664	ug/L	3.783	1	-1	40678	1
	Se	78	289.679	ug/L	3.601	1	9315	114077	1
	Mo	98	328.562	ug/L	7.014	2	35	1109383	2
	Y	89		ug/L			271155	244846	1
	Kr	83		ug/L			529	796	3
>	In	115		ug/L			840042	776169	0
	Ag	107	308.042	ug/L	6.252	2	32	3119645	2
	Cd	111	290.846	ug/L	2.150	0	72	1124602	0
	Cd	114	305.321	ug/L	1.910	0	44	2933622	0
	Sb	121	306.155	ug/L	4.675	1	346	3645530	1
	Sb	123	306.094	ug/L	3.686	1	257	2767812	1
	Ba	135	305.088	ug/L	3.069	1	17	1064971	1
	Ba	137	309.899	ug/L	2.187	0	19	1871209	0
>	Tb	159		ug/L			1001666	962277	0
	Tl	205	296.494	ug/L	0.086	0	206	8938433	0
	Pb	208	298.811	ug/L	1.586	0	157	11513336	0
	Bi	209		ug/L			2293546	1836063	0
	Th	232	302.204	ug/L	4.714	1	1512	11185862	1
	U	238	295.238	ug/L	4.680	1	29	11729888	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:15:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			681751	660964	2
	Be	9	0.007	ug/L	0.007	108	8	24	68
	C	13		ug/L			63994	62290	1
	Cl	37		ug/L			3532807	3575475	2
>	Sc	45		ug/L			674505	648232	1
	V	51	-0.002	ug/L	0 010	469	6013	5749	1
	V-1	51	0.004	ug/L	0.007	163	387	424	18
	Cr	52	-0.014	ug/L	0.021	149	17778	16928	0
	Cr	53	0.007	ug/L	0.031	468	210	210	17
	Mn	55	0.012	ug/L	0.004	31	314	487	10
	Co	59	0.003	ug/L	0.003	124	73	102	38
>	Ge	72		ug/L			426798	414211	2
	Ni	60	0.038	ug/L	0.003	7	26	123	5
	Ni	62	1.539	ug/L	0.447	29	48	610	24
	Cu	63	0.120	ug/L	0.041	34	88	779	28
	Cu	65	0.015	ug/L	0.006	39	42	78	18
	Zn	66	0.814	ug/L	0.008	0	141	1369	1
	Zn	67	0.686	ug/L	0.053	7	21	195	5
	Zn	68	0.758	ug/L	0.021	2	144	969	3
	As	75	0.016	ug/L	0.008	52	220	235	3
	As-1	75	0.130	ug/L	0.150	115	9153	9062	0
	Se	82	-0.080	ug/L	0.063	78	-1	-14	67
	Se	78	0.391	ug/L	0.532	136	9315	9192	0
	Mo	98	0.042	ug/L	0.007	17	35	187	14
	Y	89		ug/L			271155	266145	0
	Kr	83		ug/L			529	546	2
>	In	115		ug/L			840042	816768	0
	Ag	107	0.008	ug/L	0.004	46	32	117	34
	Cd	111	0.013	ug/L	0.017	127	72	125	55
	Cd	114	0.014	ug/L	0.021	154	44	184	117
	Sb	121	0.291	ug/L	0.013	4	346	3977	4
	Sb	123	0.295	ug/L	0.003	1	257	3061	1
	Ba	135	0.014	ug/L	0.015	105	17	67	79
	Ba	137	0.015	ug/L	0.013	87	19	116	73
>	Tb	159		ug/L			1001666	983468	0
	Tl	205	0.044	ug/L	0.012	26	206	1558	24
	Pb	208	0.013	ug/L	0.009	72	157	659	55
	Bi	209		ug/L			2293546	2240936	1
	Th	232	0.174	ug/L	0.021	12	1512	8052	9
	U	238	0.009	ug/L	0.006	67	29	373	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:21:54
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	679448	1
	Be	9	0.006	ug/L	0.007	120	8	22	74
	C	13		ug/L			63994	63657	1
	Cl	37		ug/L			3532807	3565042	4
>	Sc	45		ug/L			674505	659410	1
	V	51	-0.009	ug/L	0.016	186	6013	5763	4
	V-1	51	0.003	ug/L	0.017	603	387	417	54
	Cr	52	-0.045	ug/L	0.039	85	17778	16862	1
	Cr	53	-0.007	ug/L	0.010	142	210	196	8
	Mn	55	0.017	ug/L	0.016	96	314	571	45
	Co	59	0.008	ug/L	0.013	153	73	172	90
>	Ge	72		ug/L			426798	413152	1
	Ni	60	0.028	ug/L	0.019	69	26	96	52
	Ni	62	0.260	ug/L	0.042	16	48	142	11
	Cu	63	0.031	ug/L	0.012	38	88	266	26
	Cu	65	0.011	ug/L	0.010	91	42	70	39
	Zn	66	0.430	ug/L	0.031	7	141	786	6
	Zn	67	0.407	ug/L	0.024	5	21	124	5
	Zn	68	0.451	ug/L	0.027	5	144	631	3
	As	75	0.013	ug/L	0.030	233	220	232	19
	As-1	75	0.120	ug/L	0.088	72	9153	9028	1
	Se	82	-0.007	ug/L	0.043	640	-1	-2	234
	Se	78	0.404	ug/L	0.340	84	9315	9176	1
	Mo	98	0.009	ug/L	0.003	30	35	69	14
	Y	89		ug/L			271155	257050	1
	Kr	83		ug/L			529	527	4
>	In	115		ug/L			840042	825856	0
	Ag	107	0.002	ug/L	0.001	51	32	51	19
	Cd	111	0.006	ug/L	0.000	7	72	96	1
	Cd	114	0.002	ug/L	0.002	108	44	61	30
	Sb	121	0.066	ug/L	0.011	16	346	1175	11
	Sb	123	0.067	ug/L	0.011	16	257	899	11
	Ba	135	0.008	ug/L	0.002	20	17	47	13
	Ba	137	0.009	ug/L	0.003	35	19	78	26
>	Tb	159		ug/L			1001666	981711	1
	Tl	205	0.021	ug/L	0.014	64	206	850	47
	Pb	208	0.005	ug/L	0.001	9	157	366	6
	Bi	209		ug/L			2293546	2260079	0
	Th	232	0.030	ug/L	0.003	10	1512	2612	4
	U	238	0.002	ug/L	0.001	47	29	95	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:27:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	648610	0
	Be	9	0.007	ug/L	0.002	32	8	25	22
	C	13		ug/L			63994	114971	1
	Cl	37		ug/L			3532807	9219316	0
>	Sc	45		ug/L			674505	665881	2
	V	51	0.105	ug/L	0.034	32	6013	7314	6
	V-1	51	1.430	ug/L	0.046	3	387	19385	1
	Cr	52	0.534	ug/L	0.023	4	17778	23636	1
	Cr	53	4.785	ug/L	0.109	2	210	6531	0
	Mn	55	0.066	ug/L	0.001	2	314	1341	0
	Co	59	0.024	ug/L	0.000	2	73	359	3
>	Ge	72		ug/L			426798	398034	1
	Ni	60	0.383	ug/L	0.031	7	26	974	8
	Ni	62	4.606	ug/L	0.837	18	48	1669	17
	Cu	63	1.155	ug/L	0.082	7	88	6513	5
	Cu	65	0.425	ug/L	0.015	3	42	1101	3
	Zn	66	1.677	ug/L	0.067	3	141	2569	2
	Zn	67	7.418	ug/L	0.113	1	21	1839	0
	Zn	68	1.069	ug/L	0.017	1	144	1258	3
	As	75	0.112	ug/L	0.057	50	220	356	22
	As-1	75	0.473	ug/L	0.020	4	9153	9174	1
	Se	82	-0.419	ug/L	0.080	19	-1	-63	17
	Se	78	1.478	ug/L	0.287	19	9315	9248	1
	Mo	98	449.119 ✓	ug/L	10.973	2	35	1578060	1
	Y	89		ug/L			271155	263434	0
	Kr	83		ug/L			529	786	5
>	In	115		ug/L			840042	822154	1
	Ag	107	0.030	ug/L	0.002	7	32	354	6
	Cd	111	0.113	ug/L	0.008	6	72	532	4
	Cd	114	0.272	ug/L	0.011	3	44	2813	2
	Sb	121	0.108	ug/L	0.008	7	346	1697	7
	Sb	123	0.108	ug/L	0.004	3	257	1285	3
	Ba	135	0.057	ug/L	0.003	4	17	226	3
	Ba	137	0.050	ug/L	0.002	3	19	337	4
>	Tb	159		ug/L			1001666	1001600	0
	Tl	205	0.047	ug/L	0.005	9	206	1687	8
	Pb	208	0.039	ug/L	0.001	2	157	1741	2
	Bi	209		ug/L			2293546	1966403	1
	Th	232	0.211	ug/L	0.111	52	1512	9656	44
	U	238	0.017	ug/L	0.000	1	29	723	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:32:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	635191	1
	Be	9	0.001	ug/L	0.002	175	8	10	39
	C	13		ug/L			63994	61914	4
	Cl	37		ug/L			3532807	3591312	4
>	Sc	45		ug/L			674505	640852	0
	V	51	-0.004	ug/L	0.005	106	6013	5657	1
	V-1	51	0.078	ug/L	0.017	21	387	1372	15
	Cr	52	-0.038	ug/L	0.011	27	17778	16471	1
	Cr	53	0.229	ug/L	0.055	23	210	491	14
	Mn	55	0.009	ug/L	0.000	3	314	439	1
	Co	59	-0.000	ug/L	0.001	435	73	66	17
>	Ge	72		ug/L			426798	393570	0
	Ni	60	0.049	ug/L	0.002	4	26	143	4
	Ni	62	0.245	ug/L	0.078	31	48	130	20
	Cu	63	0.033	ug/L	0.005	14	88	261	10
	Cu	65	0.014	ug/L	0.005	31	42	74	15
	Zn	66	0.943	ug/L	0.050	5	141	1485	4
	Zn	67	0.841	ug/L	0.009	1	21	223	0
	Zn	68	0.888	ug/L	0.042	4	144	1056	3
	As	75	0.038	ug/L	0.022	57	220	254	12
	As-1	75	0.183	ug/L	0.042	22	9153	8684	0
	Se	82	-0.029	ug/L	0.049	168	-1	-5	120
	Se	78	0.599	ug/L	0.213	35	9315	8815	0
	Mo	98	0.074	ug/L	0.012	16	35	291	14
	Y	89		ug/L			271155	258714	2
	Kr	83		ug/L			529	541	1
>	In	115		ug/L			840042	822509	0
	Ag	107	0.000	ug/L	0.000	197	32	34	14
	Cd	111	0.004	ug/L	0.003	61	72	88	12
	Cd	114	0.000	ug/L	0.001	825	44	45	23
	Sb	121	0.008	ug/L	0.006	80	346	436	17
	Sb	123	0.008	ug/L	0.004	46	257	329	10
	Ba	135	0.006	ug/L	0.002	35	17	40	20
	Ba	137	0.008	ug/L	0.001	7	19	68	5
>	Tb	159		ug/L			1001666	992149	2
	Tl	205	0.000	ug/L	0.000	168	206	213	5
	Pb	208	0.008	ug/L	0.001	9	157	467	4
	Bi	209		ug/L			2293546	2287878	0
	Th	232	-0.029	ug/L	0.001	3	1512	407	10
	U	238	-0.000	ug/L	0.000	87	29	22	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:37:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	657826 ✓	0
	Be	9	50.406	ug/L	1.336	2	8	116738	2
	C	13		ug/L			63994	62859	0
	Cl	37		ug/L			3532807	3670750	0
>	Sc	45		ug/L			674505	649136 ✓	1
	V	51	49.115	ug/L	0.079	0	6013	637090	1
	V-1	51	49.194	ug/L	0.317	0	387	637851	1
	Cr	52	48.659	ug/L	0.508	1	17778	557451	0
	Cr	53	48.923	ug/L	1.476	3	210	63235	1
	Mn	55	49.341	ug/L	1.593	3	314	754271	1
	Co	59	50.377	ug/L	1.722	3	73	590321	1
>	Ge	72		ug/L			426798	405628 ✓	0
	Ni	60	49.121	ug/L	0.511	1	26	124195	1
	Ni	62	51.130	ug/L	0.944	1	48	18442	1
	Cu	63	49.726	ug/L	0.664	1	88	282360	1
	Cu	65	51.431	ug/L	0.410	0	42	131164	0
	Zn	66	50.272	ug/L	0.766	1	141	74628	1
	Zn	67	50.444	ug/L	1.075	2	21	12634	2
	Zn	68	50.640	ug/L	1.295	2	144	54427	2
	As	75	50.678	ug/L	0.364	0	220	69740	0
	As-1	75	50.051	ug/L	0.308	0	9153	77589	0
	Se	82	52.605	ug/L	0.466	0	-1	7916	0
	Se	78	50.390	ug/L	0.456	0	9315	28361	0
	Mo	98	55.258	ug/L	0.522	0	35	197924	0
	Y	89		ug/L			271155	261496	1
	Kr	83		ug/L			529	549	4
>	In	115		ug/L			840042	822790 ✓	0
	Ag	107	55.340	ug/L	0.802	1	32	594147	1
	Cd	111	50.572	ug/L	0.608	1	72	207344	0
	Cd	114	50.658	ug/L	0.600	1	44	516035	1
	Sb	121	50.599	ug/L	0.546	1	346	638961	0
	Sb	123	50.378	ug/L	0.719	1	257	483083	1
	Ba	135	49.846	ug/L	0.139	0	17	184458	0
	Ba	137	49.733	ug/L	0.903	1	19	318365	2
>	Tb	159		ug/L			1001666	1005462 ✓	1
	Tl	205	48.466	ug/L	0.474	0	206	1526739	0
	Pb	208	49.781	ug/L	0.322	0	157	2004186	0
	Bi	209		ug/L			2293546	2225104	0
	Th	232	47.939	ug/L	0.887	1	1512	1855266	1
	U	238	48.978	ug/L	1.646	3	29	2033809	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:44:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	650878	3
	Be	**9**	**0.004**	ug/L	0.002	44	8	16	19
	C	**13**		ug/L			63994	63249	2
	Cl	**37**		ug/L			3532807	3537997	2
>	**Sc**	**45**		ug/L			674505	640016	1
	V	**51**	**-0.015**	ug/L	0.003	18	6013	5518	1
	V-1	**51**	**0.007**	ug/L	0.001	13	387	461	2
	Cr	**52**	**-0.048**	ug/L	0.030	62	17778	16346	1
	Cr	**53**	**0.024**	ug/L	0.022	91	210	230	11
	Mn	**55**	**0.001**	ug/L	0.001	214	314	307	5
	Co	**59**	**0.000**	ug/L	0.001	220	73	73	10
>	**Ge**	**72**		ug/L			426798	397130	1
	Ni	**60**	**0.000**	ug/L	0.001	1625	26	24	9
	Ni	**62**	**0.089**	ug/L	0.031	35	48	76	15
	Cu	**63**	**0.003**	ug/L	0.003	78	88	100	13
	Cu	**65**	**-0.004**	ug/L	0.004	82	42	28	32
	Zn	**66**	**0.001**	ug/L	0.007	698	141	133	8
	Zn	**67**	**-0.008**	ug/L	0.008	103	21	18	9
	Zn	**68**	**-0.008**	ug/L	0.003	35	144	125	3
	As	**75**	**0.037**	ug/L	0.014	37	220	255	7
	As-1	**75**	**0.158**	ug/L	0.007	4	9153	8729	1
	Se	**82**	**-0.006**	ug/L	0.055	847	-1	-2	299
	Se	**78**	**0.491**	ug/L	0.053	10	9315	8854	1
	Mo	**98**	**0.013**	ug/L	0.001	8	35	78	3
	Y	**89**		ug/L			271155	254925	0
	Kr	**83**		ug/L			529	525	3
>	**In**	**115**		ug/L			840042	806547	0
	Ag	**107**	**0.001**	ug/L	0.000	21	32	39	4
	Cd	**111**	**0.003**	ug/L	0.001	36	72	81	4
	Cd	**114**	**0.000**	ug/L	0.001	711	44	44	15
	Sb	**121**	**0.049**	ug/L	0.006	12	346	942	7
	Sb	**123**	**0.053**	ug/L	0.008	14	257	740	9
	Ba	**135**	**-0.001**	ug/L	0.001	99	17	14	16
	Ba	**137**	**0.001**	ug/L	0.001	67	19	25	18
>	**Tb**	**159**		ug/L			1001666	967690	2
	Tl	**205**	**0.004**	ug/L	0.004	91	206	335	38
	Pb	**208**	**0.000**	ug/L	0.000	54	157	171	7
	Bi	**209**		ug/L			2293546	2234478	1
	Th	**232**	**0.071**	ug/L	0.005	6	1512	4083	2
	U	**238**	**0.001**	ug/L	0.000	.13	29	85	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:48:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	681027	0
	Be	9	~0.004	ug/L	0.001	34	8	17	17
	C	13		ug/L			63994	67576	1
	Cl	37		ug/L			3532807	3593519	3
>	Sc	45		ug/L			674505	660697	1
	V	51	-0.003	ug/L	0.005	141	6013	5847	0
	V-1	51	0.004	ug/L	0.001	24	387	426	1
	Cr	52	-0.014	ug/L	0.012	86	17778	17252	0
	Cr	53	0.008	ug/L	0.003	33	210	216	2
	Mn	55	0.023	ug/L	0.000	0	314	665	1
	Co	59	0.002	ug/L	0.001	39	73	93	8
>	Ge	72		ug/L			426798	408504	1
	Ni	60	0.009	ug/L	0.001	16	26	47	6
	Ni	62	0.028	ug/L	0.013	48	48	56	7
	Cu	63	0.063	ug/L	0.003	5	88	446	4
	Cu	65	0.059	ug/L	0.003	4	42	192	2
	Zn	66	0.489	ug/L	0.011	2	141	865	1
	Zn	67	0.446	ug/L	0.026	5	21	132	5
	Zn	68	0.507	ug/L	0.022	4	144	685	2
	As	75	0.026	ug/L	0.013	48	220	246	6
	As-1	75	0.097	ug/L	0.095	97	9153	8894	1
	Se	82	0.000	ug/L	0.076	245321	-1	-1	706
	Se	78	0.300	ug/L	0.322	107	9315	9032	1
	Mo	98	0.005	ug/L	0.001	20	35	51	7
	Y	89		ug/L			271155	263082	1
	Kr	83		ug/L			529	528	6
>	In	115		ug/L			840042	832193	2
	Ag	107	0.001	ug/L	0.001	171	32	39	30
	Cd	111	0.004	ug/L	0.002	46	72	88	6
	Cd	114	0.001	ug/L	0.001	71	44	53	11
	Sb	121	0.005	ug/L	0.004	92	346	403	12
	Sb	123	0.004	ug/L	0.005	136	257	288	14
	Ba	135	0.016	ug/L	0.002	14	17	75	8
	Ba	137	0.019	ug/L	0 001	7	19	142	5
>	Tb	159		ug/L			1001666	996605	1
	Tl	205	0.002	ug/L	0.003	197	206	252	35
	Pb	208	0.014	ug/L	0.001	3	157	704	1
	Bi	209		ug/L			2293546	2290038	1
	Th	232	0.057	ug/L	0.017	30	1512	3710	19
	U	238	0.000	ug/L	0.000	510	29	30	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:52:51
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662078	1
	Be	9	25.397	ug/L	0.550	2	8	59195	1
	C	13		ug/L			63994	66946	0
	Cl	37		ug/L			3532807	3624604	1
>	Sc	45		ug/L			674505	668252	0
	V	51	24.976	ug/L	0.084	0	6013	336437	1
	V-1	51	24.812	ug/L	0.194	0	387	331420	1
	Cr	52	25.249	ug/L	0.753	2	17778	306242	1
	Cr	53	24.715	ug/L	0.139	0	210	33000	0
	Mn	55	25.082	ug/L	0.657	2	314	394958	1
	Co	59	25.490	ug/L	0.158	0	73	307657	1
>	Ge	72		ug/L			426798	403505	1
	Ni	60	26.564	ug/L	0.599	2	26	66810	1
	Ni	62	26.067	ug/L	0.841	3	48	9377	4
	Cu	63	27.045	ug/L	0.084	0	88	152804	1
	Cu	65	27.848	ug/L	0.073	0	42	70668	0
	Zn	66	85.013	ug/L	0.205	0	141	125449	1
	Zn	67	78.284	ug/L	1.272	1	21	19492	0
	Zn	68	82.754	ug/L	0.763	0	144	88395	2
	As	75	26.135	ug/L	0.322	1	220	35879	2
	As-1	75	25.647	ug/L	0.326	1	9153	43768	1
	Se	82	84.354	ug/L	0.586	0	-1	12628	1
	Se	78	81.935	ug/L	1.161	1	9315	40358	0
	Mo	98	26.596	ug/L	0.317	1	35	94779	0
	Y	89		ug/L			271155	261404	2
	Kr	83		ug/L			529	535	7
>	In	115		ug/L			840042	836348	1
	Ag	107	28.100	ug/L	0.455	1	32	306611	0
	Cd	111	25.212	ug/L	0.202	0	72	105108	1
	Cd	114	25.212	ug/L	0.209	0	44	261045	0
	Sb	121	24.825	ug/L	0.540	2	346	318774	1
	Sb	123	24.911	ug/L	0.343	1	257	242917	0
	Ba	135	25.526	ug/L	0.273	1	17	96019	1
	Ba	137	25.439	ug/L	0.308	1	19	165509	0
>	Tb	159		ug/L			1001666	1012343	0
	Tl	205	25.523	ug/L	0.049	0	206	809663	0
	Pb	208	26.079	ug/L	0.188	0	157	1057206	0
	Bi	209		ug/L			2293546	2291502	0
	Th	232	24.401	ug/L	0.360	1	1512	951598	0
	U	238	24.197	ug/L	0.128	0	29	1011465	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:56:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

BL

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	719001	1
	Be	9	1.160	ug/L	0.039	3	8	2943	2
	C	13		ug/L			63994	86323	1
	Cl	37		ug/L			3532807	3564561	2
>	Sc	45		ug/L			674505	777250	2
	V	51	38.470	ug/L	1.646	4	6013	598500	1
	V-1	51	38.480	ug/L	2.031	5	387	596934	2
	Cr	52	32.065	ug/L	0.358	1	17778	446801	1
	Cr	53	32.266	ug/L	1.670	5	210	49987	2
	Mn	55	402.848	ug/L	9.693	2	314	7370606	0
	Co	59	9.370	ug/L	0.523	5	73	131451	2
>	Ge	72		ug/L			426798	414419	1
	Ni	60	29.094	ug/L	0.166	0	26	75161	1
	Ni	62	31.097	ug/L	0.737	2	48	11479	3
	Cu	63	28.196	ug/L	0.261	0	88	163599	0
	Cu	65	28.476	ug/L	0.498	1	42	74211	1
	Zn	66	107.635	ug/L	1.512	1	141	163071	0
	Zn	67	126.122	ug/L	1.674	1	21	32240	0
	Zn	68	118.252	ug/L	1.413	1	144	129648	0
	As	75	9.035	ug/L	0.026	0	220	12879	1
	As-1	75	8.809	ug/L	0.071	0	9153	21273	0
	Se	82	-0.905	ug/L	0.050	5	-1	-141	6
	Se	78	-0.135	ug/L	0.166	122	9315	8991	0
	Mo	98	0.380	ug/L	0.019	4	35	1424	3
	Y	89		ug/L			271155	492422	0
	Kr	83		ug/L			529	1244	3
>	In	115		ug/L			840042	826716	1
	Ag	107	0.315	ug/L	0.009	3	32	3430	1
	Cd	111	0.713	ug/L	0.125	17	72	3003	15
	Cd	114	0.346	ug/L	0.007	2	44	3585	1
	Sb	121	0.034	ug/L	0.006	17	346	775	8
	Sb	123	0.038	ug/L	0.005	12	257	621	6
	Ba	135	387.808	ug/L	5.365	1	17	1441714	0
	Ba	137	408.216	ug/L	6.194	1	19	2625099	0
>	Tb	159		ug/L			1001666	1020055	0
	Tl	205	0.134	ug/L	0.004	2	206	4482	2
	Pb	208	25.521	ug/L	0.248	0	157	1042531	1
	Bi	209		ug/L			2293546	2192860	0
	Th	232	5.279	ug/L	0.055	1	1512	208646	1
	U	238	2.068	ug/L	0.018	0	29	87116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:01:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	724604	2
	Be	9	1.148	ug/L	0.029	2	8	2936	3
	C	13		ug/L			63994	81902	0
	Cl	37		ug/L			3532807	3636535	0
>	Sc	45		ug/L			674505	784571	1
	V	51	37.021	ug/L	0.622	1	6013	582032	0
	V-1	51	36.875	ug/L	0.558	1	387	577965	0
	Cr	52	26.037	ug/L	0.960	3	17778	370050	1
	Cr	53	25.857	ug/L	0.598	2	210	40515	0
	Mn	55	553.659	ug/L	2.164	0	314	10229656	1
	Co	59	9.225	ug/L	0.239	2	73	130737	1
>	Ge	72		ug/L			426798	414791	0
	Ni	60	31.326	ug/L	0.448	1	26	80995	0
	Ni	62	33.508	ug/L	0.583	1	48	12374	1
	Cu	63	31.851	ug/L	0.470	1	88	184980	1
	Cu	65	32.837	ug/L	0.188	0	42	85650	0
	Zn	66	100.666	ug/L	2.190	2	141	152666	1
	Zn	67	118.239	ug/L	1.860	1	21	30256	1
	Zn	68	111.058	ug/L	1.986	1	144	121897	2
	As	75	9.551	ug/L	0.134	1	220	13613	0
	As-1	75	9.311	ug/L	0.174	1	9153	21999	0
	Se	82	-0.624	ug/L	0.083	13	-1	-97	13
	Se	78	-0.060	ug/L	0.179	297	9315	9029	0
	Mo	98	0.382	ug/L	0.014	3	35	1435	3
	Y	89		ug/L			271155	530125	0
	Kr	83		ug/L			529	1164	4
>	In	115		ug/L			840042	830296	2
	Ag	107	0.430	ug/L	0.016	3	32	4686	2
	Cd	111	0.760	ug/L	0.034	4	72	3217	4
	Cd	114	0.363	ug/L	0.011	3	44	3771	2
	Sb	121	0.016	ug/L	0.005	28	346	547	9
	Sb	123	0.015	ug/L	0.005	32	257	397	10
	Ba	135	354.733	ug/L	9.097	2	17	1324142	0
	Ba	137	364.359	ug/L	6.813	1	19	2352891	0
>	Tb	159		ug/L			1001666	1025497	0
	Tl	205	0.148	ug/L	0.001	0	206	4972	1
	Pb	208	20.049	ug/L	0.183	0	157	823367	0
	Bi	209		ug/L			2293546	2154270	0
	Th	232	5.438	ug/L	0.055	1	1512	216027	0
	U	238	2.478	ug/L	0.027	1	29	104949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:05:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	736751	0
	Be	**9**	**1.143**	ug/L	0.028	2	8	2974	2
	C	**13**		ug/L			63994	83590	2
	Cl	**37**		ug/L			3532807	3690345	4
>	**Sc**	**45**		ug/L			674505	808820	3
	V	**51**	**35.402**	ug/L	1.755	4	6013	573523	1
	V-1	**51**	**35.179**	ug/L	1.507	4	387	567930	0
	Cr	**52**	**26.766**	ug/L	1.154	4	17778	391319	0
	Cr	**53**	**26.276**	ug/L	0.757	2	210	42430	2
	Mn	**55**	**389.302**	ug/L	21.927	5	314	7406021	2
	Co	**59**	**8.490**	ug/L	0.286	3	73	123984	0
>	**Ge**	**72**		ug/L			426798	415316	0
	Ni	**60**	**26.317**	ug/L	0.236	0	26	68138	0
	Ni	**62**	**29.105**	ug/L	0.757	2	48	10768	2
	Cu	**63**	**34.877**	ug/L	0.562	1	88	202804	2
	Cu	**65**	**36.036**	ug/L	0.471	1	42	94111	1
	Zn	**66**	**98.266**	ug/L	1.350	1	141	149236	1
	Zn	**67**	**111.843**	ug/L	0.594	0	21	28658	0
	Zn	**68**	**103.809**	ug/L	0.865	0	144	114089	0
	As	**75**	**8.086**	ug/L	0.088	1	220	11574	1
	As-1	**75**	**7.877**	ug/L	0.078	0	9153	20007	0
	Se	**82**	**-0.609**	ug/L	0.032	5	-1	-95	5
	Se	**78**	**0.132**	ug/L	0.132	100	9315	9117	0
	Mo	**98**	**0.300**	ug/L	0 012	4	35	1136	4
	Y	**89**		ug/L			271155	603270	1
	Kr	**83**		ug/L			529	1208	3
>	**In**	**115**		ug/L			840042	818477	1
	Ag	**107**	**0.741**	ug/L	0.011	1	32	7944	0
	Cd	**111**	**0.705**	ug/L	0.038	5	72	2943	3
	Cd	**114**	**0.263**	ug/L	0 005	1	44	2706	2
	Sb	**121**	**0.007**	ug/L	0.001	15	346	422	2
	Sb	**123**	**0.010**	ug/L	0.004	43	257	342	10
	Ba	**135**	**283.472**	ug/L	6.380	2	17	1043301	1
	Ba	**137**	**285.217**	ug/L	7.970	2	19	1815590	1
>	**Tb**	**159**		ug/L			1001666	1036163	0
	Tl	**205**	**0.147**	ug/L	0.001	0	206	4980	0
	Pb	**208**	**17.768**	ug/L	0.167	0	157	737299	0
	Bi	**209**		ug/L			2293546	2090871	4
	Th	**232**	**5.269**	ug/L	0.067	1	1512	211539	1
	U	**238**	**2.828**	ug/L	0.039	1	29	121036	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:09:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	700421	1
	Be	9	0.846	ug/L	0.026	3	8	2095	2
	C	13		ug/L			63994	89314	2
	Cl	37		ug/L			3532807	3553860	1
>	Sc	45		ug/L			674505	752480	0
	V	51	30.951	ug/L	0.054	0	6013	467875	0
	V-1	51	30.864	ug/L	0.237	0	387	464099	1
	Cr	52	20.723	ug/L	0.389	1	17778	286614	1
	Cr	53	20.712	ug/L	0.285	1	210	31179	1
	Mn	55	837.648	ug/L	2.980	0	314	14843840	0
	Co	59	7.657	ug/L	0.107	1	73	104127	1
>	Ge	72		ug/L			426798	412325	1
	Ni	60	24.273	ug/L	0.372	1	26	62388	1
	Ni	62	25.239	ug/L	0.300	1	48	9276	0
	Cu	63	15.385	ug/L	0.193	1	88	88849	0
	Cu	65	15.885	ug/L	0.506	3	42	41194	1
	Zn	66	152.222	ug/L	0.679	0	141	229417	1
	Zn	67	165.866	ug/L	3.353	2	21	42174	0
	Zn	68	161.828	ug/L	4.372	2	144	176440	1
	As	75	9.871	ug/L	0.079	0	220	13978	1
	As-1	75	9.821	ug/L	0.198	2	9153	22580	0
	Se	82	-0.508	ug/L	0.081	15	-1	-79	17
	Se	78	0.193	ug/L	0.469	243	9315	9073	0
	Mo	98	0.397	ug/L	0.015	3	35	1480	1
	Y	89		ug/L			271155	348931	3
	Kr	83		ug/L			529	888	4
>	In	115		ug/L			840042	814873	0
	Ag	107	0.238	ug/L	0.011	4	32	2566	4
	Cd	111	1.281	ug/L	0.049	3	72	5269	3
	Cd	114	1.045	ug/L	0.012	1	44	10582	1
	Sb	121	0.038	ug/L	0.003	7	346	805	5
	Sb	123	0.038	ug/L	0.002	6	257	608	4
	Ba	135	485.039	ug/L	10.130	2	17	1777447	1
	Ba	137	505.252	ug/L	1.708	0	19	3202923	1
>	Tb	159		ug/L			1001666	991390	1
	Tl	205	0.125	ug/L	0.002	1	206	4092	1
	Pb	208	37.627	ug/L	0.577	1	157	1493627	1
	Bi	209		ug/L			2293546	2107174	4
	Th	232	4.088	ug/L	0.047	1	1512	157374	0
	U	238	0.596	ug/L	0.003	0	29	24428	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:13:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	716563	1
	Be	9	0.784	ug/L	0.031	3	8	1987	3
	C	13		ug/L			63994	103357	3
	Cl	37		ug/L			3532807	3657254	1
>	Sc	45		ug/L			674505	743893	1
	V	51	32.403	ug/L	0.646	1	6013	483848	1
	V-1	51	32.243	ug/L	0.452	1	387	479229	1
	Cr	52	23.860	ug/L	0.751	3	17778	323207	2
	Cr	53	23.571	ug/L	0.151	0	210	35045	1
	Mn	55	1071.543	ug/L	22.639	2	314	18770515	2
	Co	59	7.660	ug/L	0.159	2	73	102959	2
>	Ge	72		ug/L			426798	424780	1
	Ni	60	20.053	ug/L	0.788	3	26	53090	2
	Ni	62	21.771	ug/L	0.287	1	48	8251	1
	Cu	63	19.769	ug/L	0.432	2	88	117587	1
	Cu	65	20.134	ug/L	0.047	0	42	53798	1
	Zn	66	128.889	ug/L	0.215	0	141	200148	1
	Zn	67	133.184	ug/L	1.420	1	21	34896	0
	Zn	68	134.415	ug/L	0.739	0	144	151043	0
	As	75	17.160	ug/L	0.274	1	220	24873	1
	As-1	75	16.991	ug/L	0.299	1	9153	33598	1
	Se	82	-0.130	ug/L	0.143	109	-1	-22	101
	Se	78	-0.016	ug/L	0.315	1980	9315	9264	0
	Mo	98	0.499	ug/L	0.010	1	35	1908	0
	Y	89		ug/L			271155	364431	1
	Kr	83		ug/L			529	790	6
>	In	115		ug/L			840042	848740	1
	Ag	107	0.109	ug/L	0.009	8	32	1239	6
	Cd	111	1.714	ug/L	0.025	1	72	7317	0
	Cd	114	1.613	ug/L	0.022	1	44	16994	0
	Sb	121	0.093	ug/L	0.005	5	346	1555	2
	Sb	123	0.092	ug/L	0.001	1	257	1171	2
	Ba	135	272.461	ug/L	2.209	0	17	1039913	0
	Ba	137	275.435	ug/L	5.409	1	19	1818346	1
>	Tb	159		ug/L			1001666	1013774	1
	Tl	205	0.145	ug/L	0.004	2	206	4801	2
	Pb	208	71.785	ug/L	0.480	0	157	2913973	1
	Bi	209		ug/L			2293546	2210852	2
	Th	232	3.564	ug/L	0.013	0	1512	140492	1
	U	238	0.733	ug/L	0.001	0	29	30721	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:17:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	707916	0
	Be	9	0.679	ug/L	0.018	2	8	1700	2
	C	13		ug/L			63994	91531	0
	Cl	37		ug/L			3532807	3715678	3
>	Sc	45		ug/L			674505	759493	2
	V	51	26.274	ug/L	0.338	1	6013	401839	1
	V-1	51	26.192	ug/L	0.422	1	387	397489	0
	Cr	52	20.703	ug/L	0.574	2	17778	288948	1
	Cr	53	20.583	ug/L	0.814	3	210	31260	2
	Mn	55	1550.240	ug/L	48.001	3	314	27721628	2
	Co	59	8.053	ug/L	0.252	3	73	110491	2
>	Ge	72		ug/L			426798	419774	0
	Ni	60	29.091	ug/L	1.208	4	26	76141	4
	Ni	62	31.009	ug/L	1.240	3	48	11595	4
	Cu	63	16.437	ug/L	0.242	1	88	96652	2
	Cu	65	16.833	ug/L	0.366	2	42	44459	2
	Zn	66	132.794	ug/L	2.558	1	141	203787	2
	Zn	67	136.357	ug/L	1.006	0	21	35310	1
	Zn	68	137.506	ug/L	2.163	1	144	152707	2
	As	75	21.115	ug/L	0.121	0	220	30198	0
	As-1	75	21.012	ug/L	0.079	0	9153	38933	0
	Se	82	-0.379	ug/L	0.117	30	-1	-60	30
	Se	78	0.201	ug/L	0.205	101	9315	9243	1
	Mo	98	0.435	ug/L	0.010	2	35	1646	1
	Y	89		ug/L			271155	337104	1
	Kr	83		ug/L			529	876	4
>	In	115		ug/L			840042	844861	1
	Ag	107	0.143	ug/L	0.002	1	32	1609	2
	Cd	111	1.620	ug/L	0.013	0	72	6891	1
	Cd	114	1.463	ug/L	0.042	2	44	15341	2
	Sb	121	0.106	ug/L	0.003	2	346	1723	3
	Sb	123	0.105	ug/L	0.012	11	257	1295	8
	Ba	135	259.359	ug/L	3.592	1	17	985399	1
	Ba	137	260.680	ug/L	6.338	2	19	1713063	1
>	Tb	159		ug/L			1001666	1000018	1
	Tl	205	0.177	ug/L	0.001	0	206	5736	2
	Pb	208	84.535	ug/L	0.599	0	157	3384856	1
	Bi	209		ug/L			2293546	2210273	1
	Th	232	3.850	ug/L	0.021	0	1512	149608	1
	U	238	0.496	ug/L	0.003	0	29	20517	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:22:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	703860	0
	Be	9	0.681	ug/L	0.005	0	8	1695	0
	C	13		ug/L			63994	96598	0
	Cl	37		ug/L			3532807	3552616	0
>	Sc	45		ug/L			674505	762937	2
	V	51	25.187	ug/L	1.220	4	6013	386982	2
	V-1	51	25.085	ug/L	1.238	4	387	382203	2
	Cr	52	16.832	ug/L	0.431	2	17778	239745	1
	Cr	53	16.725	ug/L	0.427	2	210	25563	0
	Mn	55	926.230	ug/L	34.807	3	314	16631158	1
	Co	59	6.191	ug/L	0.195	3	73	85321	0
>	Ge	72		ug/L			426798	419352	1
	Ni	60	19.378	ug/L	0.309	1	26	50659	1
	Ni	62	20.963	ug/L	0.573	2	48	7843	1
	Cu	63	15.238	ug/L	0.387	2	88	89491	1
	Cu	65	15.637	ug/L	0.136	0	42	41253	1
	Zn	66	147.729	ug/L	1.213	0	141	226439	1
	Zn	67	147.844	ug/L	1.835	1	21	38239	0
	Zn	68	151.463	ug/L	5.099	3	144	167952	1
	As	75	12.463	ug/L	0.282	2	220	17890	0
	As-1	75	12.437	ug/L	0.420	3	9153	26683	0
	Se	82	-0.138	ug/L	0.187	135	-1	-23	125
	Se	78	0.321	ug/L	0.565	176	9315	9278	0
	Mo	98	0.549	ug/L	0.019	3	35	2068	2
	Y	89		ug/L			271155	350282	1
	Kr	83		ug/L			529	728	7
>	In	115		ug/L			840042	850262	0
	Ag	107	0.190	ug/L	0.007	3	32	2135	2
	Cd	111	1.580	ug/L	0.017	1	72	6766	0
	Cd	114	1.442	ug/L	0.032	2	44	15218	1
	Sb	121	0.086	ug/L	0.002	2	346	1471	1
	Sb	123	0.085	ug/L	0.002	2	257	1106	1
	Ba	135	197.434	ug/L	2.916	1	17	754941	1
	Ba	137	197.275	ug/L	1.656	0	19	1304863	0
>	Tb	159		ug/L			1001666	1013813	1
	Tl	205	0.142	ug/L	0.004	2	206	4727	2
	Pb	208	62.224	ug/L	0.839	1	157	2525765	0
	Bi	209		ug/L			2293546	2206898	0
	Th	232	3.660	ug/L	0.039	1	1512	144241	0
	U	238	1.343	ug/L	0.032	2	29	56251	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:26:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	693496	1
	Be	9	0.640	ug/L	0.010	1	8	1571	0
	C	13		ug/L			63994	102486	1
	Cl	37		ug/L			3532807	3639665	2
>	Sc	45		ug/L			674505	751325	3
	V	51	21.332	ug/L	0.573	2	6013	323900	1
	V-1	51	21.291	ug/L	0.640	3	387	319596	0
	Cr	52	13.338	ug/L	0.460	3	17778	191161	1
	Cr	53	13.414	ug/L	0.668	4	210	20224	2
	Mn	55	1206.813	ug/L	62.140	5	314	21333427	2
	Co	59	5.599	ug/L	0.294	5	73	75962	2
>	Ge	72		ug/L			426798	434648	1
	Ni	60	12.429	ug/L	0.387	3	26	33691	2
	Ni	62	13.580	ug/L	0.218	1	48	5285	2
	Cu	63	13.421	ug/L	0.129	0	88	81720	1
	Cu	65	13.972	ug/L	0.045	0	42	38214	1
	Zn	66	141.648	ug/L	5.155	3	141	225005	2
	Zn	67	151.552	ug/L	3.689	2	21	40632	2
	Zn	68	151.843	ug/L	7.046	4	144	174524	3
	As	75	9.977	ug/L	0.085	0	220	14892	0
	As-1	75	9.784	ug/L	0.170	1	9153	23749	0
	Se	82	-0.022	ug/L	0.032	147	-1	-5	96
	Se	78	-0.324	ug/L	0.389	119	9315	9351	0
	Mo	98	0.259	ug/L	0.011	4	35	1031	4
	Y	89		ug/L			271155	357586	0
	Kr	83		ug/L			529	681	0
>	In	115		ug/L			840042	845748	1
	Ag	107	0.085	ug/L	0.005	5	32	969	6
	Cd	111	1.924	ug/L	0.026	1	72	8176	0
	Cd	114	1.824	ug/L	0.008	0	44	19144	0
	Sb	121	0.159	ug/L	0.003	2	346	2415	2
	Sb	123	0.155	ug/L	0 001	0	257	1788	1
	Ba	135	378.155	ug/L	3.929	1	17	1438227	0
	Ba	137	393.247	ug/L	3.692	0	19	2587146	0
>	Tb	159		ug/L			1001666	1020200	0
	Tl	205	0.148	ug/L	0.004	2	206	4951	1
	Pb	208	75.614	ug/L	0.482	0	157	3088791	0
	Bi	209		ug/L			2293546	2244736	0
	Th	232	3.324	ug/L	0.015	0	1512	131969	0
	U	238	0.726	ug/L	0.011	1	29	30599	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:31:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	681494 ✓	1
	Be	9	50.478	ug/L	0.254	0	8	121123	1
	C	13		ug/L			63994	67045	1
	Cl	37		ug/L			3532807	3776792	1
>	Sc	45		ug/L			674505	708035 ✓	0
	V	51	47.413	ug/L	0.286	0	6013	671036	0
	V-1	51	47.367	ug/L	0.481	1	387	669938	0
	Cr	52	47.507	ug/L	0.727	1	17778	594188	2
	Cr	53	47.355	ug/L	0.526	1	210	66792	0
	Mn	55	47.753	ug/L	0.279	0	314	796580	1
	Co	59	47.195	ug/L	1.375	2	73	603470	3
>	Ge	72		ug/L			426798	418703 ✓	0
	Ni	60	50.083	ug/L	0.352	0	26	130712	1
	Ni	62	49.172	ug/L	0.666	1	48	18311	2
	Cu	63	51.258	ug/L	1.704	3	88	300380	2
	Cu	65	50.943	ug/L	0.075	0	42	134110	0
	Zn	66	49.953	ug/L	0.540	1	141	76543	0
	Zn	67	50.112	ug/L	1.717	3	21	12956	3
	Zn	68	50.325	ug/L	1.512	3	144	55828	2
	As	75	50.747	ug/L	0.631	1	220	72081	0
	As-1	75	50.464	ug/L	0.690	1	9153	80672	0
	Se	82	51.650	ug/L	0.146	0	-1	8023	0
	Se	78	50.630	ug/L	0.458	0	9315	29371	0
	Mo	98	52.332	ug/L	0.824	1	35	193482	1
	Y	89		ug/L			271155	268633	1
	Kr	83		ug/L			529	547	4
>	In	115		ug/L			840042	819510 ✓	0
	Ag	107	52.858	ug/L	0.923	1	32	565220	1
	Cd	111	50.291	ug/L	0.330	0	72	205379	0
	Cd	114	50.402	ug/L	0.169	0	44	511354	0
	Sb	121	50.420	ug/L	0.100	0	346	634186	0
	Sb	123	50.220	ug/L	0.180	0	257	479663	0
	Ba	135	49.606	ug/L	0.538	1	17	182840	0
	Ba	137	49.400	ug/L	0.471	0	19	314952	0
>	Tb	159		ug/L			1001666	996761 ✓	0
	Tl	205	48.390	ug/L	0.396	0	206	1511241	0
	Pb	208	49.165	ug/L	0.377	0	157	1962289	0
	Bi	209		ug/L			2293546	2188755	0
	Th	232	47.439	ug/L	0.568	1	1512	1820219	1
	U	238	47.871	ug/L	0.092	0	29	1970232	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:37:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	669220 ✓	1
Be	9	0.001	ug/L	0.002	125	8	12	36
C	13		ug/L			63994	64513	1
Cl	37		ug/L			3532807	3655930	4
Sc	45		ug/L			674505	670359 ✓	3
V	51	-0.022	ug/L	0.011	51	6013	5686	3
V-1	51	-0.020	ug/L	0.000	1	387	114	6
Cr	52	-0.075	ug/L	0.035	46	17778	16797	2
Cr	53	-0.069	ug/L	0.008	10	210	116	6
Mn	55	0.003	ug/L	0.001	45	314	358	2
Co	59	-0.000	ug/L	0.001	509	73	71	6
Ge	72		ug/L			426798	415373 ✓	1
Ni	60	-0.001	ug/L	0.001	114	26	23	8
Ni	62	0.011	ug/L	0.008	74	48	51	6
Cu	63	-0.000	ug/L	0.001	335	88	84	6
Cu	65	-0.004	ug/L	0.003	92	42	31	26
Zn	66	-0.005	ug/L	0.010	200	141	130	12
Zn	67	0.014	ug/L	0.023	164	21	24	23
Zn	68	-0.010	ug/L	0.005	52	144	129	5
As	75	0.017	ug/L	0.020	119	220	237	10
As-1	75	0.129	ug/L	0.102	78	9153	9089	0
Se	82	-0.044	ug/L	0.030	67	-1	-8	53
Se	78	0.412	ug/L	0.342	83	9315	9228	0
Mo	98	0.003	ug/L	0.001	28	35	45	5
Y	89		ug/L			271155	259185	1
Kr	83		ug/L			529	543	2
In	115		ug/L			840042	821372 ✓	0
Ag	107	-0.000	ug/L	0.000	70	32	28	10
Cd	111	0.001	ug/L	0.001	133	72	74	5
Cd	114	-0.001	ug/L	0.001	177	44	38	23
Sb	121	0.033	ug/L	0.006	17	346	758	8
Sb	123	0.037	ug/L	0.005	12	257	607	6
Ba	135	-0.000	ug/L	0.001	290	17	15	29
Ba	137	0.001	ug/L	0.000	54	19	22	9
Tb	159		ug/L			1001666	962148 ✓	0
Tl	205	0.005	ug/L	0.005	97	206	343	41
Pb	208	0.001	ug/L	0.000	16	157	194	3
Bi	209		ug/L			2293546	2222751	0
Th	232	0.054	ug/L	0.004	6	1512	3435	4
U	238	0.001	ug/L	0.000	3	29	60	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 17:43:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	687193	1
	Be	9	0.168	ug/L	0.008	4	8	414	3
	C	13		ug/L			63994	70880	2
	Cl	37		ug/L			3532807	3544444	1
>	Sc	45		ug/L			674505	717250	2
	V	51	5.507	ug/L	0.162	2	6013	84569	1
	V-1	51	5.476	ug/L	0.198	3	387	78772	1
	Cr	52	6.338	ug/L	0.301	4	17778	96656	3
	Cr	53	6.216	ug/L	0.352	5	210	9068	3
	Mn	55	237.587	ug/L	7.866	3	314	4010869	0
	Co	59	1.788	ug/L	0.086	4	73	23211	1
>	Ge	72		ug/L			426798	426580	0
	Ni	60	6.489	ug/L	0.229	3	26	17277	4
	Ni	62	6.712	ug/L	0.131	1	48	2587	0
	Cu	63	3.596	ug/L	0.034	0	88	21555	1
	Cu	65	3.811	ug/L	0.110	2	42	10259	3
	Zn	66	43.598	ug/L	0.731	1	141	68078	1
	Zn	67	45.714	ug/L	0.885	1	21	12045	2
	Zn	68	45.831	ug/L	0.318	0	144	51817	1
	As	75	3.359	ug/L	0.036	1	220	5066	1
	As-1	75	3.273	ug/L	0.016	0	9153	13886	1
	Se	82	-0.033	ug/L	0.089	265	-1	-7	195
	Se	78	-0.201	ug/L	0.134	66	9315	9229	1
	Mo	98	0.108	ug/L	0.006	5	35	442	5
	Y	89		ug/L			271155	298881	1
	Kr	83		ug/L			529	578	4
>	In	115		ug/L			840042	842039	0
	Ag	107	0.043	ug/L	0.003	7	32	509	7
	Cd	111	0.467	ug/L	0.014	3	72	2029	2
	Cd	114	0.432	ug/L	0.011	2	44	4544	2
	Sb	121	0.009	ug/L	0.003	30	346	459	8
	Sb	123	0.009	ug/L	0.003	28	257	349	8
	Ba	135	79.416	ug/L	1.180	1	17	300727	0
	Ba	137	79.385	ug/L	1.115	1	19	519993	0
>	Tb	159		ug/L			1001666	999246	0
	Tl	205	0.038	ug/L	0.003	7	206	1382	6
	Pb	208	12.334	ug/L	0.064	0	157	493622	0
	Bi	209		ug/L			2293546	2297978	0
	Th	232	1.097	ug/L	0.014	1	1512	43685	1
	U	238	0.135	ug/L	0.003	2	29	5602	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:47:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			681751	693854	0
Be	9	0.826	ug/L	0.016	1	8	2027	1
C	13		ug/L			63994	86528	2
Cl	37		ug/L			3532807	3635492	0
Sc	45		ug/L			674505	774098	1
V	51	24.870	ug/L	0.527	2	6013	388042	0
V-1	51	24.775	ug/L	0.466	1	387	383275	0
Cr	52	28.401	ug/L	0.420	1	17778	396511	0
Cr	53	28.004	ug/L	0.318	1	210	43281	0
Mn	55	1071.980	ug/L	30.317	2	314	19537978	1
Co	59	8.144	ug/L	0.057	0	73	113920	0
Ge	72		ug/L			426798	414641	2
Ni	60	31.796	ug/L	0.366	1	26	82192	3
Ni	62	33.677	ug/L	0.241	0	48	12434	2
Cu	63	17.698	ug/L	0.064	0	88	102775	2
Cu	65	18.245	ug/L	0.354	1	42	47577	0
Zn	66	213.308	ug/L	6.657	3	141	323136	2
Zn	67	215.090	ug/L	7.057	3	21	54992	3
Zn	68	220.438	ug/L	5.108	2	144	241630	0
As	75	16.619	ug/L	0.476	2	220	23512	0
As-1	75	16.588	ug/L	0.623	3	9153	32217	0
Se	82	-0.279	ug/L	0.089	32	-1	-44	28
Se	78	0.589	ug/L	0.515	87	9315	9280	0
Mo	98	0.589	ug/L	0.013	2	35	2192	1
Y	89		ug/L			271155	382213	0
Kr	83		ug/L			529	908	1
In	115		ug/L			840042	818109	1
Ag	107	0.218	ug/L	0.011	5	32	2361	4
Cd	111	2.285	ug/L	0.022	0	72	9382	1
Cd	114	2.075	ug/L	0.026	1	44	21059	0
Sb	121	0.059	ug/L	0.004	7	346	1081	3
Sb	123	0.060	ug/L	0.006	9	257	821	6
Ba	135	410.338	ug/L	7.294	1	17	1509548	0
Ba	137	425.096	ug/L	12.310	2	19	2704924	1
Tb	159		ug/L			1001666	1015216	0
Tl	205	0.179	ug/L	0.001	0	206	5917	0
Pb	208	59.035	ug/L	0.411	0	157	2399917	1
Bi	209		ug/L			2293546	2168252	0
Th	232	5.233	ug/L	0.073	1	1512	205855	1
U	238	0.650	ug/L	0.012	1	29	27289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:51:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	696466	1
	Be	9	0.851	ug/L	0.004	0	8	2095	0
	C	13		ug/L			63994	89380	2
	Cl	37		ug/L			3532807	3710422	4
>	Sc	45		ug/L			674505	773543	0
	V	51	28.646	ug/L	0.385	1	6013	445644	0
	V-1	51	28.691	ug/L	0.508	1	387	443490	1
	Cr	52	28.597	ug/L	0.150	0	17778	398847	0
	Cr	53	28.740	ug/L	0.477	1	210	44380	1
	Mn	55	1002.278	ug/L	24.879	2	314	18256924	2
	Co	59	8.286	ug/L	0.131	1	73	115817	1
>	Ge	72		ug/L			426798	413110	2
	Ni	60	32.753	ug/L	0.835	2	26	84311	0
	Ni	62	34.803	ug/L	1.054	3	48	12793	0
	Cu	63	17.806	ug/L	0.336	1	88	102998	1
	Cu	65	18.622	ug/L	0.465	2	42	48375	0
	Zn	66	207.890	ug/L	3.232	1	141	313798	0
	Zn	67	213.433	ug/L	4.050	1	21	54376	2
	Zn	68	213.661	ug/L	9 000	4	144	233271	2
	As	75	15.927	ug/L	0.354	2	220	22461	1
	As-1	75	15.885	ug/L	0.480	3	9153	31117	1
	Se	82	-0.326	ug/L	0.082	25	-1	-51	26
	Se	78	0.459	ug/L	0.584	127	9315	9194	0
	Mo	98	0.645	ug/L	0.010	1	35	2388	2
	Y	89		ug/L			271155	386689	0
	Kr	83		ug/L			529	885	2
>	In	115		ug/L			840042	825771	1
	Ag	107	0.209	ug/L	0.009	4	32	2284	4
	Cd	111	2.067	ug/L	0.042	2	72	8576	2
	Cd	114	1.887	ug/L	0.026	1	44	19330	1
	Sb	121	0.047	ug/L	0.005	10	346	934	7
	Sb	123	0.046	ug/L	0.005	10	257	694	5
	Ba	135	380.281	ug/L	6.198	1	17	1412093	0
	Ba	137	399.744	ug/L	4.943	1	19	2567712	0
>	Tb	159		ug/L			1001666	1006257	1
	Tl	205	0.175	ug/L	0.005	2	206	5719	2
	Pb	208	54.177	ug/L	0.422	0	157	2182863	0
	Bi	209		ug/L			2293546	2164915	0
	Th	232	5.547	ug/L	0.075	1	1512	216201	0
	U	238	0.640	ug/L	0.020	3	29	26607	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:55:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	680581	1
	Be	9	26.375	ug/L	0.875	3	8	63180	1
	C	13		ug/L			63994	82584	2
	Cl	37		ug/L			3532807	3706048	3
>	Sc	45		ug/L			674505	775277	1
	V	51	55.472	ug/L	2.033	3	6013	858255	2
	V-1	51	54.941	ug/L	1.972	3	387	850572	2
	Cr	52	55.749	ug/L	1.283	2	17778	759809	1
	Cr	53	54.033	ug/L	1.125	2	210	83401	1
	Mn	55	1045.642	ug/L	29.330	2	314	19086214	1
	Co	59	32.850	ug/L	0.857	2	73	459821	0
>	Ge	72		ug/L			426798	415192	1
	Ni	60	60.690	ug/L	2.149	3	26	157008	2
	Ni	62	61.729	ug/L	0.728	1	48	22779	1
	Cu	63	45.538	ug/L	0.580	1	88	264648	0
	Cu	65	45.530	ug/L	1.274	2	42	118830	1
	Zn	66	287.740	ug/L	2.874	0	141	436535	0
	Zn	67	287.092	ug/L	16.511	5	21	73470	4
	Zn	68	291.942	ug/L	3.280	1	144	320472	0
	As	75	42.258	ug/L	0.287	0	220	59557	0
	As-1	75	41.856	ug/L	0.516	1	9153	67866	0
	Se	82	79.745	ug/L	1.510	1	-1	12282	1
	Se	78	78.562	ug/L	2.250	2	9315	40186	0
	Mo	98	24.644	ug/L	0.862	3	35	90345	2
	Y	89		ug/L			271155	398412	2
	Kr	83		ug/L			529	897	5
>	In	115		ug/L			840042	828567	0
	Ag	107	25.421	ug/L	0.057	0	32	274847	0
	Cd	111	26.939	ug/L	0.875	3	72	111244	2
	Cd	114	26.775	ug/L	0.573	2	44	274647	1
	Sb	121	1.282	ug/L	0.029	2	346	16633	1
	Sb	123	1.262	ug/L	0.034	2	257	12429	2
	Ba	135	415.609	ug/L	6.093	1	17	1548600	1
	Ba	137	430.426	ug/L	10.663	2	19	2774184	2
>	Tb	159		ug/L			1001666	995251	1
	Tl	205	25.279	ug/L	0.680	2	206	788150	0
	Pb	208	82.892	ug/L	1.954	2	157	3302556	0
	Bi	209		ug/L			2293546	2161201	0
	Th	232	31.602	ug/L	0.472	1	1512	1211013	0
	U	238	25.556	ug/L	0.868	3	29	1049846	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:59:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	702019	0
	Be	9	0.507	ug/L	0.014	2	8	1262	2
	C	13		ug/L			63994	96699	2
	Cl	37		ug/L			3532807	3730940	1
>	Sc	45		ug/L			674505	770961	0
	V	51	26.494	ug/L	0.562	2	6013	411267	1
	V-1	51	26.331	ug/L	0.579	2	387	405664	1
	Cr	52	16.313	ug/L	0.123	0	17778	235496	0
	Cr	53	16.058	ug/L	0.132	0	210	24819	0
	Mn	55	1292.245	ug/L	2.744	0	314	23462329	1
	Co	59	6.522	ug/L	0.042	0	73	90875	0
>	Ge	72		ug/L			426798	428537	1
	Ni	60	13.547	ug/L	0.216	1	26	36200	0
	Ni	62	14.987	ug/L	0.147	0	48	5744	0
	Cu	63	16.907	ug/L	0.253	1	88	101471	0
	Cu	65	17.333	ug/L	0.278	1	42	46723	0
	Zn	66	270.878	ug/L	6.186	2	141	424130	1
	Zn	67	257.991	ug/L	4.688	1	21	68181	2
	Zn	68	268.809	ug/L	7.175	2	144	304530	1
	As	75	18.363	ug/L	0.380	2	220	26835	1
	As-1	75	18.155	ug/L	0.433	2	9153	35586	0
	Se	82	-0.080	ug/L	0.059	73	-1	-14	65
	Se	78	-0.222	ug/L	0.444	199	9315	9261	0
	Mo	98	0.477	ug/L	0.019	3	35	1841	3
	Y	89		ug/L			271155	354333	0
	Kr	83		ug/L			529	730	0
>	In	115		ug/L			840042	856157	0
	Ag	107	0.139	ug/L	0.003	1	32	1582	1
	Cd	111	5.438	ug/L	0.071	1	72	23268	1
	Cd	114	5.230	ug/L	0.044	0	44	55471	1
	Sb	121	0.330	ug/L	0.006	1	346	4686	1
	Sb	123	0.326	ug/L	0.003	0	257	3510	1
	Ba	135	336.767	ug/L	2.499	0	17	1296659	0
	Ba	137	352.231	ug/L	2.215	0	19	2346031	0
>	Tb	159		ug/L			1001666	1014171	0
	Tl	205	0.316	ug/L	0.006	1	206	10260	1
	Pb	208	252.059	ug/L	0.815	0	157	10235558	0
	Bi	209		ug/L			2293546	2213987	0
	Th	232	5.356	ug/L	0.046	0	1512	210435	0
	U	238	0.504	ug/L	0.007	1	29	21115	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:03:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	699804	1
	Be	**9**	**0.682**	ug/L	0.006	0	8	1690	1
	C	**13**		ug/L			63994	92616	1
	Cl	**37**		ug/L			3532807	3636508	4
>	**Sc**	**45**		ug/L			674505	764826	1
	V	**51**	**23.347**	ug/L	0.458	1	6013	360336	1
	V-1	**51**	**23.223**	ug/L	0.409	1	387	354992	1
	Cr	**52**	**20.417**	ug/L	0.614	3	17778	287232	1
	Cr	**53**	**20.096**	ug/L	0.428	2	210	30748	0
	Mn	**55**	**731.786**	ug/L	3.099	0	314	13180330	1
	Co	**59**	**6.188**	ug/L	0.166	2	73	85528	1
>	**Ge**	**72**		ug/L			426798	419639	2
	Ni	**60**	**20.521**	ug/L	1.092	5	26	53654	3
	Ni	**62**	**22.422**	ug/L	0.898	4	48	8389	2
	Cu	**63**	**18.903**	ug/L	0.696	3	88	111039	1
	Cu	**65**	**18.932**	ug/L	0.528	2	42	49962	1
	Zn	**66**	**87.481**	ug/L	0.452	0	141	134242	1
	Zn	**67**	**100.849**	ug/L	4.617	4	21	26095	2
	Zn	**68**	**95.448**	ug/L	2.852	2	144	105968	1
	As	**75**	**7.045**	ug/L	0.108	1	220	10214	0
	As-1	**75**	**6.974**	ug/L	0.299	4	9153	18924	0
	Se	**82**	**-0.217**	ug/L	0.179	82	-1	-35	76
	Se	**78**	**0.254**	ug/L	0.622	244	9315	9257	0
	Mo	**98**	**0.422**	ug/L	0.013	3	35	1599	0
	Y	**89**		ug/L			271155	401084	1
	Kr	**83**		ug/L			529	844	2
>	**In**	**115**		ug/L			840042	833821	0
	Ag	**107**	**0.165**	ug/L	0.002	0	32	1824	1
	Cd	**111**	**0.748**	ug/L	0.029	3	72	3177	4
	Cd	**114**	**0.582**	ug/L	0.013	2	44	6049	1
	Sb	**121**	**0.031**	ug/L	0.001	3	346	733	2
	Sb	**123**	**0.031**	ug/L	0.004	11	257	553	6
	Ba	**135**	**309.282**	ug/L	4.913	1	17	1159821	1
	Ba	**137**	**330.660**	ug/L	3.618	1	19	2144803	0
>	**Tb**	**159**		ug/L			1001666	1006288	1
	Tl	**205**	**0.131**	ug/L	0.005	3	206	4347	1
	Pb	**208**	**31.927**	ug/L	0.386	1	157	1286391	0
	Bi	**209**		ug/L			2293546	2208778	0
	Th	**232**	**5.350**	ug/L	0.125	2	1512	208547	1
	U	**238**	**1.099**	ug/L	0.028	2	29	45670	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:09:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683053	1
	Be	9	0.475	ug/L	0.022	4	8	1151	3
	C	13		ug/L			63994	91355	4
	Cl	37		ug/L			3532807	3543080	1
>	Sc	45		ug/L			674505	768193	0
	V	51	17.593	ug/L	0 255	1	6013	274444	1
	V-1	51	17.490	ug/L	0.178	1	387	268676	0
	Cr	52	11.830	ug/L	0.151	1	17778	175725	0
	Cr	53	11.652	ug/L	0.108	0	210	18012	1
	Mn	55	1085.447	ug/L	30.994	2	314	19634743	2
	Co	59	4.449	ug/L	0.007	0	73	61796	0
>	Ge	72		ug/L			426798	426741	0
	Ni	60	13.750	ug/L	0.465	3	26	36589	3
	Ni	62	14.977	ug/L	0.167	1	48	5717	0
	Cu	63	10.315	ug/L	0.242	2	88	61692	2
	Cu	65	10.801	ug/L	0.129	1	42	29013	1
	Zn	66	153.889	ug/L	1.972	1	141	240035	0
	Zn	67	164.315	ug/L	1.465	0	21	43250	0
	Zn	68	163.951	ug/L	0.952	0	144	185055	0
	As	75	6.360	ug/L	0.100	1	220	9400	1
	As-1	75	6.321	ug/L	0.138	2	9153	18304	0
	Se	82	-0.247	ug/L	0.067	26	-1	-41	25
	Se	78	0.141	ug/L	0.378	267	9315	9371	0
	Mo	98	0.363	ug/L	0.005	1	35	1405	1
	Y	89		ug/L			271155	344364	0
	Kr	83		ug/L			529	761	0
>	In	115		ug/L			840042	836141	1
	Ag	107	0.152	ug/L	0.002	1	32	1691	0
	Cd	111	1.584	ug/L	0.053	3	72	6667	2
	Cd	114	1.405	ug/L	0.015	1	44	14588	0
	Sb	121	0.041	ug/L	0.004	8	346	869	4
	Sb	123	0.042	ug/L	0.005	12	257	667	6
	Ba	135	421.825	ug/L	10.568	2	17	1585933	1
	Ba	137	437.199	ug/L	10.947	2	19	2843466	1
>	Tb	159		ug/L			1001666	1004811	0
	Tl	205	0.137	ug/L	0.000	0	206	4509	0
	Pb	208	66.063	ug/L	0.037	0	157	2658019	0
	Bi	209		ug/L			2293546	2229660	0
	Th	232	3.598	ug/L	0.038	1	1512	140580	1
	U	238	0.425	ug/L	0.003	0	29	17673	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 18:13:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be 11.19.12 MJ

V Cr Co

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	689491	2
Be	9	~0.192	ug/L	0.018	9	8	475	7
C	13		ug/L			63994	71114	3
Cl	37		ug/L			3532807	3716722	1
Sc	45		ug/L			674505	771845 ✓	1
V	51	7.326	ug/L	0.138	1	6013	118836	0
V-1	51	7.311	ug/L	0 140	1	387	113083	0
Cr	52	12.900	ug/L	0.316	2	17778	190669	1
Cr	53	12.704	ug/L	0.261	2	210	19705	0
Mn	55	281.131	ug/L	9.092	3	314	5108906	1
Co	59	2.239	ug/L	0.039	1	73	31283	0
Ge	72		ug/L			426798	433626	2
Ni	60	12.323	ug/L	0.414	3	26	33323	3
Ni	62	12.738	ug/L	0.481	3	48	4946	2
Cu	63	4.863	ug/L	0.118	2	88	29597	2
Cu	65	4.819	ug/L	0.118	2	42	13173	0
Zn	66	60.166	ug/L	0.862	1	141	95434	0
Zn	67	60.297	ug/L	2.643	4	21	16131	2
Zn	68	62.739	ug/L	2.178	3	144	72015	1
As	75	3.309	ug/L	0.079	2	220	5076	0
As-1	75	3.238	ug/L	0.171	5	9153	14060	0
Se	82	-0.062	ug/L	0.035	56	-1	-11	47
Se	78	-0.157	ug/L	0.345	219	9315	9397	0
Mo	98	0.113	ug/L	0.003	2	35	469	3
Y	89		ug/L			271155	303515	2
Kr	83		ug/L			529	600	2
In	115		ug/L			840042	848102	0
Ag	107	0.041	ug/L	0.001	2	32	482	2
Cd	111	0.870	ug/L	0.019	2	72	3747	2
Cd	114	0.829	ug/L	0.015	1	44	8752	1
Sb	121	-0.009	ug/L	0.002	19	346	235	9
Sb	123	-0.006	ug/L	0.003	44	257	202	12
Ba	135	90.548	ug/L	0.713	0	17	345368	0
Ba	137	90.748	ug/L	0.235	0	19	598744	0
Tb	159		ug/L			1001666	1009506	0
Tl	205	0.044	ug/L	0.003	6	206	1615	4
Pb	208	37.424	ug/L	0.565	1	157	1512739	0
Bi	209		ug/L			2293546	2314325	1
Th	232	1.119	ug/L	0.009	0	1512	44989	1
U	238	0.107	ug/L	0.002	1	29	4492	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN

Be

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, November 16, 2012 18:17:25

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690479	0
	Be	9	0.496	ug/L	0.017	3	8	1213	3
	C	13		ug/L			63994	94476	4
	Cl	37		ug/L			3532807	3715063	3
>	Sc	45		ug/L			674505	773058	1
	V	51	18.987	ug/L	0.578	3	6013	297445	1
	V-1	51	18.871	ug/L	0.626	3	387	291598	1
	Cr	52	12.527	ug/L	0.190	1	17778	186032	0
	Cr	53	12.324	ug/L	0.350	2	210	19151	1
	Mn	55	1031.025	ug/L	15.004	1	314	18772998	2
	Co	59	4.705	ug/L	0.111	2	73	65755	1
>	Ge	72		ug/L			426798	423249	1
	Ni	60	12.035	ug/L	0.277	2	26	31762	0
	Ni	62	13.159	ug/L	0.240	1	48	4987	2
	Cu	63	10.944	ug/L	0.426	3	88	64896	3
	Cu	65	11.275	ug/L	0.232	2	42	30028	0
	Zn	66	134.560	ug/L	3.056	2	141	208144	0
	Zn	67	142.372	ug/L	6.919	4	21	37150	3
	Zn	68	142.217	ug/L	3.697	2	144	159185	0
	As	75	13.991	ug/L	0.279	1	220	20244	1
	As-1	75	13.940	ug/L	0.380	2	9153	29091	0
	Se	82	-0.131	ug/L	0.038	28	-1	-22	27
	Se	78	0.241	ug/L	0.396	164	9315	9333	0
	Mo	98	0.502	ug/L	0.005	1	35	1911	1
	Y	89		ug/L			271155	356922	1
	Kr	83		ug/L			529	726	3
>	In	115		ug/L			840042	844972	0
	Ag	107	0.109	ug/L	0.009	7	32	1237	8
	Cd	111	1.755	ug/L	0.043	2	72	7459	2
	Cd	114	1.612	ug/L	0.019	1	44	16907	0
	Sb	121	0.087	ug/L	0.009	10	346	1469	8
	Sb	123	0.079	ug/L	0.002	2	257	1037	2
	Ba	135	289.768	ug/L	4.591	1	17	1101190	2
	Ba	137	293.057	ug/L	4.424	1	19	1926441	1
>	Tb	159		ug/L			1001666	1007825	1
	Tl	205	0.145	ug/L	0.002	1	206	4771	2
	Pb	208	76.275	ug/L	0.670	0	157	3078201	1
	Bi	209		ug/L			2293546	2216310	1
	Th	232	4.835	ug/L	0.054	1	1512	188936	1
	U	238	0.592	ug/L	0.007	1	29	24681	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:21:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	692772	3
	Be	9	0.520	ug/L	0.032	6	8	1276	2
	C	13		ug/L			63994	88271	0
	Cl	37		ug/L			3532807	3731395	3
>	Sc	45		ug/L			674505	785280	0
	V	51	21.708	ug/L	0.166	0	6013	344533	0
	V-1	51	21.718	ug/L	0.256	1	387	340922	0
	Cr	52	15.145	ug/L	0.137	0	17778	224182	1
	Cr	53	15.349	ug/L	0.409	2	210	24177	2
	Mn	55	679.278	ug/L	9.300	1	314	12561412	0
	Co	59	4.876	ug/L	0.045	0	73	69233	1
>	Ge	72		ug/L			426798	430643	1
	Ni	60	14.125	ug/L	0.336	2	26	37928	1
	Ni	62	15.190	ug/L	0.460	3	48	5850	2
	Cu	63	11.112	ug/L	0.190	1	88	67046	0
	Cu	65	11.472	ug/L	0.236	2	42	31089	0
	Zn	66	87.832	ug/L	0.509	0	141	138316	0
	Zn	67	93.822	ug/L	0.621	0	21	24930	0
	Zn	68	91.647	ug/L	2.414	2	144	104436	1
	As	75	7.522	ug/L	0.097	1	220	11179	1
	As-1	75	7.441	ug/L	0.134	1	9153	20107	0
	Se	82	-0.180	ug/L	0.070	38	-1	-30	37
	Se	78	0.081	ug/L	0.333	408	9315	9432	0
	Mo	98	0.425	ug/L	0.007	1	35	1652	2
	Y	89		ug/L			271155	372721	2
	Kr	83		ug/L			529	775	2
>	In	115		ug/L			840042	841096	0
	Ag	107	0.092	ug/L	0.001	1	32	1043	1
	Cd	111	0.735	ug/L	0.032	4	72	3151	4
	Cd	114	0.591	ug/L	0.005	0	44	6200	0
	Sb	121	0.030	ug/L	0.002	6	346	727	3
	Sb	123	0.034	ug/L	0.012	34	257	591	19
	Ba	135	209.450	ug/L	0.504	0	17	792283	0
	Ba	137	209.497	ug/L	1.599	0	19	1370812	1
>	Tb	159		ug/L			1001666	1017447	0
	Tl	205	0.125	ug/L	0.001	0	206	4195	0
	Pb	208	50.987	ug/L	0.673	1	157	2077098	0
	Bi	209		ug/L			2293546	2231017	0
	Th	232	4.816	ug/L	0.050	1	1512	189976	0
	U	238	0.719	ug/L	0.007	1	29	30245	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:25:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	663575	0
	Be	9	52.743	ug/L	0.935	1	8	123229	2
	C	13		ug/L			63994	69176	3
	Cl	37		ug/L			3532807	3843309	1
>	Sc	45		ug/L			674505	724492	0
	V	51	48.591	ug/L	1.223	2	6013	703551	2
	V-1	51	48.465	ug/L	0.928	1	387	701432	2
	Cr	52	47.789	ug/L	1.221	2	17778	611474	2
	Cr	53	47.405	ug/L	0.816	1	210	68419	1
	Mn	55	47.252	ug/L	0.723	1	314	806533	1
	Co	59	47.132	ug/L	0.912	1	73	616655	1
>	Ge	72		ug/L			426798	429076	0
	Ni	60	50.553	ug/L	1.753	3	26	135205	3
	Ni	62	49.714	ug/L	0.175	0	48	18969	0
	Cu	63	49.403	ug/L	1.012	2	88	296716	1
	Cu	65	50.065	ug/L	0.243	0	42	135062	0
	Zn	66	49.452	ug/L	0.136	0	141	77659	0
	Zn	67	49.757	ug/L	1.086	2	21	13182	1
	Zn	68	49.166	ug/L	0.503	1	144	55899	0
	As	75	50.486	ug/L	0.470	0	220	73491	0
	As-1	75	50.123	ug/L	0.419	0	9153	82177	0
	Se	82	51.083	ug/L	0.909	1	-1	8131	1
	Se	78	49.804	ug/L	0.726	1	9315	29760	0
	Mo	98	53.593	ug/L	0.499	0	35	203060	0
	Y	89		ug/L			271155	279740	2
	Kr	83		ug/L			529	572	0
>	In	115		ug/L			840042	823632	1
	Ag	107	54.286	ug/L	0.584	1	32	583362	1
	Cd	111	51.115	ug/L	0.304	0	72	209803	1
	Cd	114	50.350	ug/L	0.864	1	44	513328	0
	Sb	121	50.242	ug/L	1.201	2	346	634982	1
	Sb	123	50.390	ug/L	1.026	2	257	483622	0
	Ba	135	49.254	ug/L	0.571	1	17	182436	0
	Ba	137	48.955	ug/L	1.069	2	19	313631	1
>	Tb	159		ug/L			1001666	987854	0
	Tl	205	48.779	ug/L	0.798	1	206	1509723	1
	Pb	208	49.981	ug/L	0 269	0	157	1977039	0
	Bi	209		ug/L			2293546	2227711	0
	Th	232	48.909	ug/L	0.466	0	1512	1859729	0
	U	238	48.745	ug/L	0.174	0	29	1988258	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:32:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	664340 ✓	1
	Be	**9**	**0.001**	ug/L	0.001	105	8	11	30
	C	**13**		ug/L			63994	66827	2
	Cl	**37**		ug/L			3532807	3677611	5
>	**Sc**	**45**		ug/L			674505	686998 ✓	3
	V	**51**	**-0.010**	ug/L	0.011	109	6013	5989	1
	V-1	**51**	**-0.022**	ug/L	0.001	5	387	88	20
	Cr	**52**	**-0.031**	ug/L	0.036	113	17778	17730	1
	Cr	**53**	**-0.071**	ug/L	0.003	4	210	116	1
	Mn	**55**	**0.007**	ug/L	0.006	90	314	432	23
	Co	**59**	**0.001**	ug/L	0.002	248	73	85	30
>	**Ge**	**72**		ug/L			426798	413705 ✓	1
	Ni	**60**	**-0.001**	ug/L	0.001	91	26	21	16
	Ni	**62**	**-0.004**	ug/L	0.002	57	48	45	2
	Cu	**63**	**0.002**	ug/L	0.003	164	88	96	20
	Cu	**65**	**-0.006**	ug/L	0.001	11	42	24	6
	Zn	**66**	**-0.003**	ug/L	0.006	208	141	133	7
	Zn	**67**	**0.015**	ug/L	0.023	149	21	24	25
	Zn	**68**	**-0.003**	ug/L	0.019	550	144	135	14
	As	**75**	**0.026**	ug/L	0.020	78	220	249	9
	As-1	**75**	**0.161**	ug/L	0.101	62	9153	9097	0
	Se	**82**	**0.020**	ug/L	0.054	270	-1	1	617
	Se	**78**	**0.558**	ug/L	0.306	54	9315	9249	0
	Mo	**98**	**0.003**	ug/L	0.002	48	35	47	11
	Y	**89**		ug/L			271155	264161	1
	Kr	**83**		ug/L			529	542	5
>	**In**	**115**		ug/L			840042	811997 ✓	0
	Ag	**107**	**0.002**	ug/L	0.002	128	32	48	45
	Cd	**111**	**0.003**	ug/L	0.002	65	72	83	11
	Cd	**114**	**0.000**	ug/L	0.001	107	44	48	11
	Sb	**121**	**0.035**	ug/L	0.004	12	346	767	7
	Sb	**123**	**0.034**	ug/L	0.002	7	257	568	4
	Ba	**135**	**0.001**	ug/L	0.002	351	17	19	46
	Ba	**137**	**0.002**	ug/L	0.002	104	19	31	43
>	**Tb**	**159**		ug/L			1001666	953627 ✓	0
	Tl	**205**	**0.007**	ug/L	0.005	78	206	391	39
	Pb	**208**	**0.002**	ug/L	0.001	39	157	230	13
	Bi	**209**		ug/L			2293546	2258962	0
	Th	**232**	**0.057**	ug/L	0.004	6	1512	3520	3
	U	**238**	**0.001**	ug/L	0.001	61	29	70	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:38:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			681751	686839	0
	Be	9	0.003	ug/L	0.002	59	8	16	27
	C	13		ug/L			63994	72976	2
	Cl	37		ug/L			3532807	3652211	2
>	Sc	45		ug/L			674505	703583	1
	V	51	-0.001	ug/L	0.008	1236	6013	6262	0
	V-1	51	-0.022	ug/L	0.001	2	387	89	8
	Cr	52	0.005	ug/L	0.035	714	17778	18599	1
	Cr	53	-0.065	ug/L	0.011	16	210	127	10
	Mn	55	0.034	ug/L	0.003	7	314	888	3
	Co	59	0.001	ug/L	0.001	42	73	92	8
>	Ge	72		ug/L			426798	419923	0
	Ni	60	0.015	ug/L	0.003	20	26	64	11
	Ni	62	-0.010	ug/L	0.030	317	48	44	25
	Cu	63	0.014	ug/L	0.003	23	88	169	11
	Cu	65	0.012	ug/L	0.001	4	42	72	2
	Zn	66	0.162	ug/L	0.007	4	141	388	3
	Zn	67	0.151	ug/L	0.017	11	21	60	7
	Zn	68	0.172	ug/L	0.017	9	144	332	5
	As	75	-0.012	ug/L	0.009	76	220	199	6
	As-1	75	0.160	ug/L	0.064	40	9153	9233	0
	Se	82	-0.104	ug/L	0.054	51	-1	-17	46
	Se	78	0.574	ug/L	0.211	36	9315	9395	0
	Mo	98	-0.003	ug/L	0.001	39	35	24	18
	Y	89		ug/L			271155	265513	1
	Kr	83		ug/L			529	554	3
>	In	115		ug/L			840042	821741	0
	Ag	107	-0.000	ug/L	0.000	176	32	29	17
	Cd	111	0.001	ug/L	0.002	171	72	77	13
	Cd	114	-0.001	ug/L	0.000	26	44	36	5
	Sb	121	-0.005	ug/L	0.003	64	346	269	15
	Sb	123	-0.006	ug/L	0.002	40	257	195	11
	Ba	135	0.016	ug/L	0.003	21	17	74	15
	Ba	137	0.017	ug/L	0.003	18	19	124	15
>	Tb	159		ug/L			1001666	969433	1
	Tl	205	0.002	ug/L	0.003	110	206	272	28
	Pb	208	0.015	ug/L	0.000	2	157	723	2
	Bi	209		ug/L			2293546	2258791	0
	Th	232	0.031	ug/L	0.009	30	1512	2628	13
	U	238	-0.000	ug/L	0.000	314	29	25	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:42:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	692347	1
	Be	**9**	**25.189**	ug/L	0.569	2	8	61401	2
	C	**13**		ug/L			63994	69895	0
	Cl	**37**		ug/L			3532807	3738417	1
>	**Sc**	**45**		ug/L			674505	727870	0
	V	**51**	**24.826**	ug/L	0.585	2	6013	364300	2
	V-1	**51**	**24.470**	ug/L	0.467	1	387	355996	1
	Cr	**52**	**25.226**	ug/L	0.083	0	17778	333326	0
	Cr	**53**	**24.068**	ug/L	0.298	1	210	35010	1
	Mn	**55**	**24.495**	ug/L	0.246	1	314	420205	0
	Co	**59**	**24.270**	ug/L	0.360	1	73	319068	1
>	**Ge**	**72**		ug/L			426798	419155	0
	Ni	**60**	**26.653**	ug/L	0.169	0	26	69648	1
	Ni	**62**	**27.259**	ug/L	0.413	1	48	10181	0
	Cu	**63**	**27.174**	ug/L	0.445	1	88	159496	2
	Cu	**65**	**27.729**	ug/L	0.318	1	42	73096	1
	Zn	**66**	**85.743**	ug/L	0.639	0	141	131435	1
	Zn	**67**	**76.008**	ug/L	1.108	1	21	19661	0
	Zn	**68**	**83.383**	ug/L	1.852	2	144	92511	2
	As	**75**	**26.066**	ug/L	0.677	2	220	37175	3
	As-1	**75**	**25.996**	ug/L	0.249	0	9153	45965	1
	Se	**82**	**83.279**	ug/L	0.800	0	-1	12951	1
	Se	**78**	**82.373**	ug/L	1.305	1	9315	42102	1
	Mo	**98**	**26.737**	ug/L	0.153	0	35	98979	0
	Y	**89**		ug/L			271155	273890	1
	Kr	**83**		ug/L			529	566	5
>	**In**	**115**		ug/L			840042	833854	1
	Ag	**107**	**28.336**	ug/L	0.561	1	32	308301	1
	Cd	**111**	**25.239**	ug/L	0.346	1	72	104902	0
	Cd	**114**	**24.893**	ug/L	0.206	0	44	256986	0
	Sb	**121**	**24.724**	ug/L	0.326	1	346	316572	0
	Sb	**123**	**24.823**	ug/L	0.412	1	257	241339	0
	Ba	**135**	**25.164**	ug/L	0.424	1	17	94373	0
	Ba	**137**	**24.992**	ug/L	0.625	2	19	162110	1
>	**Tb**	**159**		ug/L			1001666	997189	0
	Tl	**205**	**25.275**	ug/L	0.300	1	206	789782	0
	Pb	**208**	**26.095**	ug/L	0.258	0	157	1042066	0
	Bi	**209**		ug/L			2293546	2294817	0
	Th	**232**	**24.269**	ug/L	0.152	0	1512	932294	0
	U	**238**	**24.384**	ug/L	0.170	0	29	1004012	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:46:49
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	705675	0
	Be	9	0.462	ug/L	0.004	0	8	1156	0
	C	13		ug/L			63994	93906	4
	Cl	37		ug/L			3532807	3746268	3
>	Sc	45		ug/L			674505	788247	0
	V	51	18.492	ug/L	0.617	3	6013	295636	3
	V-1	51	18.400	ug/L	0.536	2	387	289990	2
	Cr	52	12.479	ug/L	0.397	3	17778	189064	2
	Cr	53	12.340	ug/L	0.209	1	210	19558	1
	Mn	55	779.087	ug/L	22.091	2	314	14461718	2
	Co	59	4.281	ug/L	0.205	4	73	61014	4
>	Ge	72		ug/L			426798	423985	0
	Ni	60	11.919	ug/L	0.478	4	26	31517	3
	Ni	62	13.376	ug/L	0.675	5	48	5078	5
	Cu	63	9.736	ug/L	0.220	2	88	57858	2
	Cu	65	10.234	ug/L	0.044	0	42	27315	0
	Zn	66	60.295	ug/L	1.274	2	141	93528	1
	Zn	67	71.615	ug/L	1.144	1	21	18740	1
	Zn	68	67.089	ug/L	2.205	3	144	75326	3
	As	75	4.669	ug/L	0.062	1	220	6915	1
	As-1	75	4.742	ug/L	0.076	1	9153	15915	0
	Se	82	-0.042	ug/L	0.045	107	-1	-8	84
	Se	78	0.625	ug/L	0.094	14	9315	9507	0
	Mo	98	0.426	ug/L	0.006	1	35	1630	1
	Y	89		ug/L			271155	358473	1
	Kr	83		ug/L			529	708	1
>	In	115		ug/L			840042	833331	0
	Ag	107	0.100	ug/L	0.003	3	32	1125	3
	Cd	111	0.512	ug/L	0.018	3	72	2195	3
	Cd	114	0.396	ug/L	0.005	1	44	4131	1
	Sb	121	0.046	ug/L	0.004	7	346	926	5
	Sb	123	0.051	ug/L	0.006	12	257	747	8
	Ba	135	223.936	ug/L	0.180	0	17	839254	0
	Ba	137	226.700	ug/L	2.723	1	19	1469721	1
>	Tb	159		ug/L			1001666	1014310	0
	Tl	205	0.099	ug/L	0.002	1	206	3347	2
	Pb	208	20.900	ug/L	0.121	0	157	849002	1
	Bi	209		ug/L			2293546	2209126	0
	Th	232	4.509	ug/L	0.075	1	1512	177424	0
	U	238	0.687	ug/L	0.007	1	29	28794	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:50:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	689090	1
	Be	9	0.510	ug/L	0.032	6	8	1246	5
	C	13		ug/L			63994	88326	4
	Cl	37		ug/L			3532807	3647048	2
>	Sc	45		ug/L			674505	785565	2
	V	51	19.695	ug/L	0.191	0	6013	313316	1
	V-1	51	19.721	ug/L	0.266	1	387	309687	0
	Cr	52	12.965	ug/L	0.403	3	17778	194898	1
	Cr	53	13.228	ug/L	0.619	4	210	20863	2
	Mn	55	273.182	ug/L	14.494	5	314	5050392	3
	Co	59	4.563	ug/L	0.142	3	73	64781	1
>	Ge	72		ug/L			426798	429181	1
	Ni	60	12.483	ug/L	0.320	2	26	33406	1
	Ni	62	13.288	ug/L	0.169	1	48	5107	2
	Cu	63	11.833	ug/L	0.364	3	88	71136	1
	Cu	65	11.946	ug/L	0.357	2	42	32257	1
	Zn	66	50.870	ug/L	1.960	3	141	79873	2
	Zn	67	57.002	ug/L	1.246	2	21	15100	0
	Zn	68	53.822	ug/L	0.310	0	144	61192	0
	As	75	3.223	ug/L	0.044	1	220	4900	0
	As-1	75	3.210	ug/L	0.121	3	9153	13877	0
	Se	82	-0.135	ug/L	0.057	42	-1	-23	37
	Se	78	0.361	ug/L	0.240	66	9315	9514	0
	Mo	98	0.284	ug/L	0.020	7	35	1111	5
	Y	89		ug/L			271155	376051	2
	Kr	83		ug/L			529	793	1
>	In	115		ug/L			840042	838716	0
	Ag	107	0.133	ug/L	0.003	2	32	1487	1
	Cd	111	0.367	ug/L	0.043	11	72	1603	10
	Cd	114	0.191	ug/L	0.002	1	44	2027	0
	Sb	121	0.013	ug/L	0.003	22	346	517	6
	Sb	123	0.012	ug/L	0.003	24	257	374	7
	Ba	135	136.512	ug/L	3.336	2	17	514866	1
	Ba	137	135.903	ug/L	2.705	1	19	886658	1
>	Tb	159		ug/L			1001666	1004734	1
	Tl	205	0.084	ug/L	0.003	3	206	2841	2
	Pb	208	8.613	ug/L	0.179	2	157	346600	1
	Bi	209		ug/L			2293546	2240636	0
	Th	232	4.567	ug/L	0.089	1	1512	177985	0
	U	238	0.808	ug/L	0.009	1	29	33554	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:55:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	722458	2
	Be	**9**	**0.425**	ug/L	0.018	4	8	1088	1
	C	**13**		ug/L			63994	84637	2
	Cl	**37**		ug/L			3532807	3796240	2
>	**Sc**	**45**		ug/L			674505	835463	3
	V	**51**	**21.546**	ug/L	0.137	0	6013	363869	3
	V-1	**51**	**21.426**	ug/L	0.155	0	387	357856	3
	Cr	**52**	**13.749**	ug/L	0.241	1	17778	218474	2
	Cr	**53**	**13.567**	ug/L	0.147	1	210	22764	3
	Mn	**55**	**255.117**	ug/L	9.327	3	314	5015491	0
	Co	**59**	**4.493**	ug/L	0.031	0	73	67859	2
>	**Ge**	**72**		ug/L			426798	449835	2
	Ni	**60**	**12.418**	ug/L	0.470	3	26	34842	4
	Ni	**62**	**13.657**	ug/L	0.294	2	48	5500	3
	Cu	**63**	**10.909**	ug/L	0.176	1	88	68751	0
	Cu	**65**	**11.164**	ug/L	0.198	1	42	31603	1
	Zn	**66**	**37.217**	ug/L	0.729	1	141	61296	1
	Zn	**67**	**43.439**	ug/L	0.835	1	21	12068	2
	Zn	**68**	**40.380**	ug/L	0.706	1	144	48150	1
	As	**75**	**3.517**	ug/L	0.133	3	220	5581	1
	As-1	**75**	**3.522**	ug/L	0.273	7	9153	15016	1
	Se	**82**	**-0.106**	ug/L	0.067	63	-1	-19	55
	Se	**78**	**0.340**	ug/L	0.550	161	9315	9960	0
	Mo	**98**	**0.299**	ug/L	0.003	0	35	1224	3
	Y	**89**		ug/L			271155	386473	1
	Kr	**83**		ug/L			529	768	6
>	**In**	**115**		ug/L			840042	857471	0
	Ag	**107**	**0.094**	ug/L	0.009	9	32	1085	9
	Cd	**111**	**0.271**	ug/L	0.030	11	72	1231	10
	Cd	**114**	**0.123**	ug/L	0.005	4	44	1356	4
	Sb	**121**	**-0.003**	ug/L	0.002	57	346	310	8
	Sb	**123**	**-0.003**	ug/L	0.003	79	257	228	12
	Ba	**135**	**98.466**	ug/L	1.560	1	17	379745	2
	Ba	**137**	**97.767**	ug/L	1.583	1	19	652216	2
>	**Tb**	**159**		ug/L			1001666	1026568	0
	Tl	**205**	**0.074**	ug/L	0.003	3	206	2602	4
	Pb	**208**	**8.270**	ug/L	0.044	0	157	340087	1
	Bi	**209**		ug/L			2293546	2308833	0
	Th	**232**	**5.347**	ug/L	0.086	1	1512	212665	1
	U	**238**	**0.747**	ug/L	0.006	0	29	31671	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	716437	0
	Be	9	0.401	ug/L	0.018	4	8	1020	5
	C	13		ug/L			63994	99871	1
	Cl	37		ug/L			3532807	3848632	4
>	Sc	45		ug/L			674505	835805	1
	V	51	18.125	ug/L	0.646	3	6013	307275	1
	V-1	51	17.973	ug/L	0.759	4	387	300226	2
	Cr	52	19.363	ug/L	0.103	0	17778	298907	1
	Cr	53	18.844	ug/L	0.491	2	210	31522	0
	Mn	55	609.241	ug/L	14.112	2	314	11988562	0
	Co	59	5.059	ug/L	0.066	1	73	76435	0
>	Ge	72		ug/L			426798	448508	2
	Ni	60	13.524	ug/L	0.642	4	26	37808	3
	Ni	62	14.544	ug/L	0.275	1	48	5835	0
	Cu	63	14.542	ug/L	0.622	4	88	91306	1
	Cu	65	14.814	ug/L	0.289	1	42	41796	1
	Zn	66	136.705	ug/L	3.860	2	141	224076	2
	Zn	67	141.945	ug/L	4.566	3	21	39262	2
	Zn	68	145.356	ug/L	3.537	2	144	172427	2
	As	75	8.462	ug/L	0.216	2	220	13063	0
	As-1	75	8.378	ug/L	0.319	3	9153	22361	0
	Se	82	-0.117	ug/L	0.111	95	-1	-21	88
	Se	78	0.084	ug/L	0.465	555	9315	9822	0
	Mo	98	0.343	ug/L	0.009	2	35	1396	2
	Y	89		ug/L			271155	387096	1
	Kr	83		ug/L			529	773	2
>	In	115		ug/L			840042	843928	1
	Ag	107	0.097	ug/L	0.003	2	32	1098	1
	Cd	111	2.295	ug/L	0.054	2	72	9718	1
	Cd	114	2.222	ug/L	0.039	1	44	23255	0
	Sb	121	0.089	ug/L	0.005	5	346	1493	4
	Sb	123	0.090	ug/L	0.004	4	257	1143	4
	Ba	135	260.374	ug/L	2.176	0	17	988268	2
	Ba	137	260.305	ug/L	1.896	0	19	1708848	0
>	Tb	159		ug/L			1001666	1016988	1
	Tl	205	0.121	ug/L	0.002	1	206	4049	1
	Pb	208	103.483	ug/L	0 763	0	157	4213803	0
	Bi	209		ug/L			2293546	2262406	0
	Th	232	4.735	ug/L	0.042	0	1512	186728	0
	U	238	0.488	ug/L	0.008	1	29	20508	1

ICP-MS Quantitative Analysis - Summary Report

Pb Zn

Sample ID: VR32 L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:03:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	711201	2
	Be	9	0.171	ug/L	0.006	3	8	438	2
	C	13		ug/L			63994	84334	2
	Cl	37		ug/L			3532807	3961001	3
>	Sc	45		ug/L			674505	822497	3
	V	51	6.143	ug/L	0.151	2	6013	107327	0
	V-1	51	6.293	ug/L	0.192	3	387	103745	1
	Cr	52	15.612	ug/L	0.486	3	17778	241268	2
	Cr	53	15.845	ug/L	0.464	2	210	26117	0
	Mn	55	449.891	ug/L	4.700	1	314	8714806	3
	Co	59	3.758	ug/L	0.118	3	73	55873	0
>	Ge	72		ug/L			426798	449687	0
	Ni	60	14.836	ug/L	0.146	0	26	41604	1
	Ni	62	15.897	ug/L	0.594	3	48	6391	3
	Cu	63	9.600	ug/L	0.092	0	88	60505	1
	Cu	65	10.011	ug/L	0.238	2	42	28338	2
	Zn	66	133.932	ug/L	1.553	1	141	220179	1
	Zn	67	130.405	ug/L	2.921	2	21	36174	1
	Zn	68	136.432	ug/L	2.195	1	144	162295	1
	As	75	3.615	ug/L	0.018	0	220	5731	0
	As-1	75	3.573	ug/L	0.055	1	9153	15095	0
	Se	82	0.031	ug/L	0.040	129	-1	3	210
	Se	78	0.070	ug/L	0.195	281	9315	9845	0
	Mo	98	0.152	ug/L	0.004	2	35	639	3
	Y	89		ug/L			271155	319304	2
	Kr	83		ug/L			529	637	1
>	In	115		ug/L			840042	868798	0
	Ag	107	0.065	ug/L	0.002	3	32	773	2
	Cd	111	2.393	ug/L	0.032	1	72	10433	0
	Cd	114	2.281	ug/L	0.005	0	44	24578	0
	Sb	121	0.020	ug/L	0.002	9	346	624	4
	Sb	123	0.019	ug/L	0.002	9	257	463	3
	Ba	135	166.322	ug/L	2.496	1	17	649829	1
	Ba	137	168.529	ug/L	2.972	1	19	1138963	1
>	Tb	159		ug/L			1001666	1021920	0
	Tl	205	0.114	ug/L	0.002	1	206	3847	1
	Pb	208	102.715	ug/L	0.505	0	157	4202939	0
	Bi	209		ug/L			2293546	2335155	0
	Th	232	1.250	ug/L	0.015	1	1512	50665	0
	U	238	0.159	ug/L	0.002	1	29	6743	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:07:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			681751	695254	0
	Be	**9**	**0.854**	ug/L	0.021	2	8	2098	3
	C	**13**		ug/L			63994	131576	3
	Cl	**37**		ug/L			3532807	3890752	1
>	**Sc**	**45**		ug/L			674505	874272	1
	V	**51**	**28.436**	ug/L	0.884	3	6013	500170	4
	V-1	**51**	**28.675**	ug/L	0.567	1	387	501071	3
	Cr	**52**	**73.085**	ug/L	1.587	2	17778	1116388	3
	Cr	**53**	**72.682**	ug/L	0.944	1	210	126439	1
	Mn	**55**	**2076.405**	ug/L	33.940	1	314	42753724	2
	Co	**59**	**17.252**	ug/L	0.278	1	73	272407	0
>	**Ge**	**72**		ug/L			426798	438853	1
	Ni	**60**	**72.171**	ug/L	1.178	1	26	197391	1
	Ni	**62**	**76.832**	ug/L	0.479	0	48	29957	1
	Cu	**63**	**46.638**	ug/L	1.266	2	88	286477	2
	Cu	**65**	**47.106**	ug/L	1.192	2	42	129954	1
	Zn	**66**	**622.935**	ug/L	17.773	2	141	998626	1
	Zn	**67**	**596.053**	ug/L	7 803	1	21	161279	1
	Zn	**68**	**644.376**	ug/L	16.164	2	144	747581	3
	As	**75**	**17.414**	ug/L	0.394	2	220	26073	1
	As-1	**75**	**17.319**	ug/L	0.518	2	9153	35196	1
	Se	**82**	**0.083**	ug/L	0.111	133	-1	11	155
	Se	**78**	**0.530**	ug/L	0.542	102	9315	9799	1
	Mo	**98**	**0.719**	ug/L	0.020	2	35	2824	1
	Y	**89**		ug/L			271155	457727	0
	Kr	**83**		ug/L			529	856	1
>	**In**	**115**		ug/L			840042	878162	0
	Ag	**107**	**0.299**	ug/L	0.001	0	32	3464	0
	Cd	**111**	**10.706**	ug/L	0.168	1	72	46909	1
	Cd	**114**	**10.444**	ug/L	0.063	0	44	113577	0
	Sb	**121**	**0.162**	ug/L	0.009	5	346	2549	5
	Sb	**123**	**0.164**	ug/L	0.002	1	257	1947	1
	Ba	**135**	**849.071**	ug/L	6.534	0	17	3353182	0
	Ba	**137**	**843.640**	ug/L	17.054	2	19	5763468	2
>	**Tb**	**159**		ug/L			1001666	1014559	1
	Tl	**205**	**0.561**	ug/L	0.009	1	206	18053	1
	Pb	**208**	**500.833**	ug/L	4.487	0	157	20344752	0
	Bi	**209**		ug/L			2293546	2173022	0
	Th	**232**	**5.995**	ug/L	0.062	1	1512	235488	2
	U	**238**	**0.778**	ug/L	0.002	0	29	32601	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:12:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	718068	1
	Be	**9**	**0.437**	ug/L	0.005	1	8	1114	0
	C	**13**		ug/L			63994	110133	0
	Cl	**37**		ug/L			3532807	3913424	3
>	**Sc**	**45**		ug/L			674505	871177	1
	V	**51**	**16.866**	ug/L	0.353	2	6013	298672	1
	V-1	**51**	**16.801**	ug/L	0.293	1	387	292680	1
	Cr	**52**	**13.424**	ug/L	0.201	1	17778	223016	0
	Cr	**53**	**13.307**	ug/L	0.363	2	210	23284	1
	Mn	**55**	**779.533**	ug/L	24.460	3	314	15989333	2
	Co	**59**	**4.419**	ug/L	0.173	3	73	69582	2
>	**Ge**	**72**		ug/L			426798	464937	0
	Ni	**60**	**12.240**	ug/L	0.273	2	26	35488	1
	Ni	**62**	**13.507**	ug/L	0.176	1	48	5622	0
	Cu	**63**	**14.222**	ug/L	0.247	1	88	92625	1
	Cu	**65**	**14.276**	ug/L	0.064	0	42	41763	0
	Zn	**66**	**235.187**	ug/L	3.257	1	141	399604	1
	Zn	**67**	**227.518**	ug/L	4.728	2	21	65236	1
	Zn	**68**	**235.693**	ug/L	4.009	1	144	289773	1
	As	**75**	**8.120**	ug/L	0.059	0	220	13010	1
	As-1	**75**	**8.035**	ug/L	0.038	0	9153	22646	0
	Se	**82**	**-0.003**	ug/L	0.108	3591	-1	-2	715
	Se	**78**	**0.125**	ug/L	0.286	228	9315	10203	0
	Mo	**98**	**0.339**	ug/L	0.010	2	35	1429	2
	Y	**89**		ug/L			271155	375942	1
	Kr	**83**		ug/L			529	767	1
>	**In**	**115**		ug/L			840042	879760	0
	Ag	**107**	**0.131**	ug/L	0.003	2	32	1534	2
	Cd	**111**	**3.584**	ug/L	0.023	0	72	15784	0
	Cd	**114**	**3.466**	ug/L	0.031	0	44	37788	0
	Sb	**121**	**0.112**	ug/L	0.001	0	346	1869	0
	Sb	**123**	**0.120**	ug/L	0.010	8	257	1501	6
	Ba	**135**	**284.161**	ug/L	1.684	0	17	1124268	0
	Ba	**137**	**283.599**	ug/L	1.361	0	19	1940917	0
>	**Tb**	**159**		ug/L			1001666	1036085	1
	Tl	**205**	**0.195**	ug/L	0.005	2	206	6532	1
	Pb	**208**	**196.032**	ug/L	3.347	1	157	8130963	0
	Bi	**209**		ug/L			2293546	2295466	1
	Th	**232**	**4.110**	ug/L	0.119	2	1512	165291	1
	U	**238**	**0.708**	ug/L	0.015	2	29	30316	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:16:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	**Li**	**6**		ug/L			681751	719924	1
	Be	**9**	**0.863**	ug/L	0.018	2	8	2196	2
	C	**13**		ug/L			63994	117998	1
	Cl	**37**		ug/L			3532807	4052008	2
>	**Sc**	**45**		ug/L			674505	942416	2
	V	**51**	**31.075**	ug/L	1.296	4	6013	588134	4
	V-1	**51**	**31.170**	ug/L	0.137	0	387	586996	2
	Cr	**52**	**87.113**	ug/L	1.934	2	17778	1428921	0
	Cr	**53**	**85.943**	ug/L	3.129	3	210	161104	4
	Mn	**55**	**1408.012**	ug/L	17.539	1	314	31242842	1
	Co	**59**	**17.012**	ug/L	0.484	2	73	289471	0
>	**Ge**	**72**		ug/L			426798	455844	1
	Ni	**60**	**89.600**	ug/L	2.900	3	26	254480	2
	Ni	**62**	**93.872**	ug/L	3.734	3	48	37993	2
	Cu	**63**	**42.292**	ug/L	0.992	2	88	269833	1
	Cu	**65**	**42.820**	ug/L	0.547	1	42	122715	0
	Zn	**66**	**426.129**	ug/L	11.006	2	141	709739	2
	Zn	**67**	**425.743**	ug/L	7.027	1	21	119656	1
	Zn	**68**	**437.373**	ug/L	6.370	1	144	527012	0
	As	**75**	**16.524**	ug/L	0.232	1	220	25710	1
	As-1	**75**	**16.482**	ug/L	0.339	2	9153	35266	1
	Se	**82**	**0.055**	ug/L	0.110	201	-1	7	252
	Se	**78**	**0.662**	ug/L	0.378	57	9315	10236	1
	Mo	**98**	**0.656**	ug/L	0.027	4	35	2679	2
	Y	**89**		ug/L			271155	443231	1
	Kr	**83**		ug/L			529	878	5
>	**In**	**115**		ug/L			840042	871070	0
	Ag	**107**	**0.290**	ug/L	0.006	1	32	3335	1
	Cd	**111**	**6.478**	ug/L	0.081	1	72	28183	0
	Cd	**114**	**6.308**	ug/L	0.056	0	44	68063	0
	Sb	**121**	**0.051**	ug/L	0.004	8	346	1042	5
	Sb	**123**	**0.052**	ug/L	0.003	5	257	791	4
	Ba	**135**	**753.901**	ug/L	7.627	1	17	2953351	1
	Ba	**137**	**746.967**	ug/L	5.655	0	19	5061727	1
>	**Tb**	**159**		ug/L			1001666	1035124	0
	Tl	**205**	**0.483**	ug/L	0.006	1	206	15871	1
	Pb	**208**	**338.391**	ug/L	2.883	0	157	14024866	0
	Bi	**209**		ug/L			2293546	2203123	0
	Th	**232**	**5.877**	ug/L	0.069	1	1512	235523	0
	U	**238**	**0.789**	ug/L	0.003	0	29	33751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 19:20:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	714773	2
	Be	9	51.803	ug/L	1.085	2	8	130335	0
	C	13		ug/L			63994	75101	0
	Cl	37		ug/L			3532807	4182247	1
>	Sc	45		ug/L			674505	832095	2
	V	51	47.312	ug/L	0.931	1	6013	786741	0
	V-1	51	47.527	ug/L	0.674	1	387	789879	1
	Cr	52	46.679	ug/L	1.800	3	17778	686101	1
	Cr	53	47.386	ug/L	0.859	1	210	78533	1
	Mn	55	45.912	ug/L	1.067	2	314	899782	0
	Co	59	45.230	ug/L	1 300	2	73	679551	2
>	Ge	72		ug/L			426798	459393	1
	Ni	60	51.193	ug/L	0.678	1	26	146573	0
	Ni	62	49.884	ug/L	1.182	2	48	20375	1
	Cu	63	50.908	ug/L	1.049	2	88	327330	1
	Cu	65	50.967	ug/L	1.408	2	42	147186	1
	Zn	66	50.882	ug/L	0.997	1	141	85539	1
	Zn	67	50.716	ug/L	0.577	1	21	14386	1
	Zn	68	50.953	ug/L	0.749	1	144	62014	0
	As	75	50.796	ug/L	0.352	0	220	79165	0
	As-1	75	50.695	ug/L	0.250	0	9153	88876	0
	Se	82	51.479	ug/L	1.125	2	-1	8772	1
	Se	78	51.163	ug/L	0.764	1	9315	32457	0
	Mo	98	49.240	ug/L	0.878	1	35	199762	2
	Y	89		ug/L			271155	296886	0
	Kr	83		ug/L			529	633	8
>	In	115		ug/L			840042	843893	1
	Ag	107	50.912	ug/L	0.435	0	32	560623	1
	Cd	111	49.685	ug/L	0.832	1	72	208909	0
	Cd	114	50.740	ug/L	0.516	1	44	530060	0
	Sb	121	49.246	ug/L	0.969	1	346	637753	0
	Sb	123	48.930	ug/L	0.637	1	257	481203	0
	Ba	135	49.142	ug/L	0.654	1	17	186497	0
	Ba	137	49.112	ug/L	0.898	1	19	322385	0
>	Tb	159		ug/L			1001666	1011766	0
	Tl	205	48.564	ug/L	0.201	0	206	1539532	0
	Pb	208	49.714	ug/L	0.316	0	157	2014122	0
	Bi	209		ug/L			2293546	2267245	0
	Th	232	47.758	ug/L	0.446	0	1512	1860009	0
	U	238	52.230	ug/L	0.076	0	29	2181966	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 19:27:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			681751	722302	1
	Be	**9**	**0.001**	ug/L	0.001	70	8	12	16
	C	**13**		ug/L			63994	73459	1
	Cl	**37**		ug/L			3532807	3981251	4
>	**Sc**	**45**		ug/L			674505	821911	0
	V	**51**	**-0.023**	ug/L	0.006	26	6013	6958	1
	V-1	**51**	**-0.023**	ug/L	0.001	4	387	97	17
	Cr	**52**	**-0.086**	ug/L	0.018	20	17778	20454	1
	Cr	**53**	**-0.085**	ug/L	0.003	3	210	117	3
	Mn	**55**	**0.009**	ug/L	0.005	57	314	559	18
	Co	**59**	**0.001**	ug/L	0.000	64	73	99	7
>	**Ge**	**72**		ug/L			426798	461699	0
	Ni	**60**	**0.001**	ug/L	0.000	10	26	31	1
	Ni	**62**	**-0.014**	ug/L	0.017	125	48	46	15
	Cu	**63**	**-0.000**	ug/L	0.002	804	88	94	13
	Cu	**65**	**-0.003**	ug/L	0.003	116	42	37	24
	Zn	**66**	**-0.011**	ug/L	0.006	59	141	135	8
	Zn	**67**	**0.011**	ug/L	0.005	47	21	26	5
	Zn	**68**	**-0.000**	ug/L	0.014	3247	144	155	11
	As	**75**	**0.027**	ug/L	0.010	37	220	281	4
	As-1	**75**	**0.125**	ug/L	0.119	95	9153	10096	1
	Se	**82**	**0.003**	ug/L	0.018	598	-1	-1	201
	Se	**78**	**0.388**	ug/L	0.405	104	9315	10247	1
	Mo	**98**	**0.001**	ug/L	0 003	390	35	41	25
	Y	**89**		ug/L			271155	291107	2
	Kr	**83**		ug/L			529	593	1
>	**In**	**115**		ug/L			840042	834594	1
	Ag	**107**	**0.000**	ug/L	0.002	666	32	35	49
	Cd	**111**	**0.003**	ug/L	0.005	183	72	84	25
	Cd	**114**	**0.002**	ug/L	0.003	204	44	61	56
	Sb	**121**	**0.029**	ug/L	0.003	9	346	709	3
	Sb	**123**	**0.031**	ug/L	0.005	16	257	558	8
	Ba	**135**	**0.006**	ug/L	0.008	143	17	38	77
	Ba	**137**	**0.007**	ug/L	0.007	109	19	61	75
>	**Tb**	**159**		ug/L			1001666	996801	0
	Tl	**205**	**0.005**	ug/L	0.003	67	206	366	30
	Pb	**208**	**0.005**	ug/L	0.003	72	157	340	39
	Bi	**209**		ug/L			2293546	2324828	1
	Th	**232**	**0.063**	ug/L	0.004	6	1512	3906	3
	U	**238**	**0.002**	ug/L	0.002	73	29	115	54

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A-L SWN
Sample Dil Factor: 500
Comments:
Sample Date/Time: Friday, November 16, 2012 19:35:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			681751	729812	1
	Be	**9**	**0.017**	ug/L	0.001	4	8	53	3
	C	**13**		ug/L			63994	77428	0
	Cl	**37**		ug/L			3532807	3845449	4
>	**Sc**	**45**		ug/L			674505	826368	1
	V	**51**	**0.667**	ug/L	0.011	1	6013	18283	1
	V-1	**51**	**0.675**	ug/L	0.015	2	387	11615	2
	Cr	**52**	**0.654**	ug/L	0.039	5	17778	31028	1
	Cr	**53**	**0.681**	ug/L	0.052	7	210	1373	5
	Mn	**55**	**35.792**	ug/L	0.540	1	314	696987	2
	Co	**59**	**0.247**	ug/L	0.003	1	73	3768	0
>	**Ge**	**72**		ug/L			426798	460217	1
	Ni	**60**	**0.867**	ug/L	0.011	1	26	2514	2
	Ni	**62**	**0.902**	ug/L	0.033	3	48	420	4
	Cu	**63**	**1.129**	ug/L	0.021	1	88	7365	0
	Cu	**65**	**1.144**	ug/L	0.034	3	42	3354	2
	Zn	**66**	**16.363**	ug/L	0.133	0	141	27660	0
	Zn	**67**	**14.930**	ug/L	0.231	1	21	4259	3
	Zn	**68**	**16.012**	ug/L	0 249	1	144	19627	0
	As	**75**	**0.557**	ug/L	0.027	4	220	1103	2
	As-1	**75**	**0.713**	ug/L	0.214	29	9153	10981	2
	Se	**82**	**0.017**	ug/L	0.095	575	-1	0	2305
	Se	**78**	**0.598**	ug/L	0.700	116	9315	10305	2
	Mo	**98**	**0.012**	ug/L	0.002	18	35	85	9
	Y	**89**		ug/L			271155	293004	1
	Kr	**83**		ug/L			529	582	5
>	**In**	**115**		ug/L			840042	859503	0
	Ag	**107**	**0.008**	ug/L	0.001	15	32	117	11
	Cd	**111**	**0.305**	ug/L	0.012	4	72	1379	4
	Cd	**114**	**0.301**	ug/L	0.001	0	44	3247	0
	Sb	**121**	**0.013**	ug/L	0.004	30	346	528	9
	Sb	**123**	**0.016**	ug/L	0.001	9	257	418	3
	Ba	**135**	**10.367**	ug/L	0.122	1	17	40089	1
	Ba	**137**	**10.287**	ug/L	0.035	0	19	68799	0
>	**Tb**	**159**		ug/L			1001666	1018310	0
	Tl	**205**	**0.015**	ug/L	0.004	28	206	691	19
	Pb	**208**	**16.676**	ug/L	0.085	0	157	680081	0
	Bi	**209**		ug/L			2293546	2379727	1
	Th	**232**	**0.142**	ug/L	0.003	1	1512	7086	1
	U	**238**	**0.026**	ug/L	0.000	0	29	1139	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:39:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	742724	2
	Be	9	0.094	ug/L	0.007	7	8	256	7
	C	13		ug/L			63994	84981	2
	Cl	37		ug/L			3532807	3946582	3
>	Sc	45		ug/L			674505	846476	1
	V	51	3.491	ug/L	0.097	2	6013	66068	3
	V-1	51	3.498	ug/L	0.065	1	387	59609	3
	Cr	52	3.682	ug/L	0.007	0	17778	75633	1
	Cr	53	3.700	ug/L	0.108	2	210	6481	1
	Mn	55	185.993	ug/L	4.275	2	314	3707816	2
	Co	59	1.209	ug/L	0.010	0	73	18579	2
>	Ge	72		ug/L			426798	463155	0
	Ni	60	4.438	ug/L	0.046	1	26	12836	0
	Ni	62	4.522	ug/L	0.121	2	48	1910	2
	Cu	63	5.794	ug/L	0.040	0	88	37650	0
	Cu	65	5.769	ug/L	0.121	2	42	16840	1
	Zn	66	82.770	ug/L	0.400	0	141	140197	0
	Zn	67	75.675	ug/L	2.264	2	21	21633	3
	Zn	68	80.715	ug/L	1.703	2	144	98954	1
	As	75	2.847	ug/L	0.033	1	220	4699	1
	As-1	75	2.936	ug/L	0.104	3	9153	14546	0
	Se	82	-0.022	ug/L	0.080	364	-1	-5	238
	Se	78	0.410	ug/L	0.273	66	9315	10290	0
	Mo	98	0.051	ug/L	0.002	4	35	245	3
	Y	89		ug/L			271155	315783	2
	Kr	83		ug/L			529	622	6
>	In	115		ug/L			840042	870252	1
	Ag	107	0.043	ug/L	0.004	9	32	519	7
	Cd	111	1.538	ug/L	0.014	0	72	6742	0
	Cd	114	1.511	ug/L	0.025	1	44	16319	0
	Sb	121	0.109	ug/L	0.004	3	346	1808	2
	Sb	123	0.103	ug/L	0.004	3	257	1315	3
	Ba	135	52.795	ug/L	0.896	1	17	206620	1
	Ba	137	52.215	ug/L	0.766	1	19	353470	0
>	Tb	159		ug/L			1001666	1023886	0
	Tl	205	0.060	ug/L	0.003	5	206	2150	6
	Pb	208	84.276	ug/L	1.041	1	157	3454938	0
	Bi	209		ug/L			2293546	2371096	0
	Th	232	0.701	ug/L	0.021	3	1512	29164	2
	U	238	0.136	ug/L	0.002	1	29	5795	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:43:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	721529	2
	Be	9	0.093	ug/L	0.006	6	8	244	8
	C	13		ug/L			63994	84203	0
	Cl	37		ug/L			3532807	3893775	3
>	Sc	45		ug/L			674505	859024	2
	V	51	3.048	ug/L	0.091	2	6013	59485	1
	V-1	51	3.036	ug/L	0 059	1	387	52547	1
	Cr	52	3.066	ug/L	0.141	4	17778	67678	1
	Cr	53	3.026	ug/L	0.052	1	210	5428	3
	Mn	55	183.326	ug/L	5.544	3	314	3707612	1
	Co	59	1.115	ug/L	0.046	4	73	17377	3
>	Ge	72		ug/L			426798	464843	2
	Ni	60	3.278	ug/L	0.053	1	26	9523	2
	Ni	62	3.436	ug/L	0.134	3	48	1468	3
	Cu	63	5.497	ug/L	0.112	2	88	35843	0
	Cu	65	5.467	ug/L	0.126	2	42	16012	0
	Zn	66	78.915	ug/L	2.094	2	141	134108	1
	Zn	67	72.355	ug/L	2.914	4	21	20744	1
	Zn	68	77.321	ug/L	2.112	2	144	95118	1
	As	75	2.770	ug/L	0.034	1	220	4595	2
	As-1	75	2.810	ug/L	0.206	7	9153	14395	0
	Se	82	0.048	ug/L	0.089	187	-1	6	244
	Se	78	0.277	ug/L	0.622	224	9315	10264	0
	Mo	98	0.054	ug/L	0.003	5	35	259	2
	Y	89		ug/L			271155	312024	1
	Kr	83		ug/L			529	609	5
>	In	115		ug/L			840042	861767	0
	Ag	107	0.042	ug/L	0.002	4	32	505	4
	Cd	111	1.491	ug/L	0.015	0	72	6474	1
	Cd	114	1.465	ug/L	0.020	1	44	15678	1
	Sb	121	0.113	ug/L	0.002	1	346	1844	0
	Sb	123	0.115	ug/L	0.004	3	257	1415	1
	Ba	135	51.281	ug/L	0.075	0	17	198758	0
	Ba	137	50.614	ug/L	0.817	1	19	339307	0
>	Tb	159		ug/L			1001666	1015290	0
	Tl	205	0.058	ug/L	0.002	2	206	2051	2
	Pb	208	80.808	ug/L	0.354	0	157	3285158	0
	Bi	209		ug/L			2293546	2354843	0
	Th	232	0.674	ug/L	0.009	1	1512	27843	0
	U	238	0.136	ug/L	0.002	1	29	5744	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:48:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	711145	0
	Be	9	5.039	ug/L	0.086	1	8	12623	1
	C	13		ug/L			63994	81486	2
	Cl	37		ug/L			3532807	3914667	5
>	Sc	45		ug/L			674505	810657	1
	V	51	7.974	ug/L	0.166	2	6013	135200	1
	V-1	51	7.874	ug/L	0.108	1	387	127889	1
	Cr	52	7.755	ug/L	0.312	4	17778	128879	1
	Cr	53	7.439	ug/L	0.035	0	210	12225	1
	Mn	55	196.093	ug/L	3.826	1	314	3743698	2
	Co	59	5.480	ug/L	0.128	2	73	80299	2
>	Ge	72		ug/L			426798	467258	1
	Ni	60	8.228	ug/L	0.166	2	26	23985	1
	Ni	62	8.332	ug/L	0.285	3	48	3506	3
	Cu	63	10.268	ug/L	0.366	3	88	67224	2
	Cu	65	10.427	ug/L	0.250	2	42	30673	3
	Zn	66	95.661	ug/L	2.945	3	141	163428	2
	Zn	67	86.936	ug/L	1.721	1	21	25063	1
	Zn	68	95.182	ug/L	2.725	2	144	117675	1
	As	75	7.522	ug/L	0.173	2	220	12128	1
	As-1	75	7.466	ug/L	0.220	2	9153	21857	1
	Se	82	15.116	ug/L	0.411	2	-1	2618	1
	Se	78	14.817	ug/L	0.586	3	9315	16805	1
	Mo	98	4.096	ug/L	0.082	2	35	16935	1
	Y	89		ug/L			271155	318954	1
	Kr	83		ug/L			529	582	4
>	In	115		ug/L			840042	862695	0
	Ag	107	4.308	ug/L	0.108	2	32	48519	2
	Cd	111	6.198	ug/L	0.057	0	72	26709	0
	Cd	114	6.209	ug/L	0.086	1	44	66350	0
	Sb	121	0.457	ug/L	0.005	1	346	6400	1
	Sb	123	0.445	ug/L	0.008	1	257	4734	1
	Ba	135	57.109	ug/L	0.592	1	17	221575	0
	Ba	137	56.882	ug/L	0.561	0	19	381754	0
>	Tb	159		ug/L			1001666	1024975	0
	Tl	205	4.510	ug/L	0.019	0	206	145015	0
	Pb	208	88.285	ug/L	0.655	0	157	3623297	0
	Bi	209		ug/L			2293546	2342141	0
	Th	232	4.837	ug/L	0.054	1	1512	192228	0
	U	238	4.588	ug/L	0 068	1	29	194171	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:52:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	712629	0
	Be	9	0.221	ug/L	0.008	3	8	562	4
	C	13		ug/L			63994	82754	4
	Cl	37		ug/L			3532807	3971888	3
>	Sc	45		ug/L			674505	836432	5
	V	51	7.093	ug/L	0.262	3	6013	124834	3
	V-1	51	6.965	ug/L	0.223	3	387	116691	3
	Cr	52	20.019	ug/L	0.505	2	17778	308359	3
	Cr	53	19.268	ug/L	0.388	2	210	32240	3
	Mn	55	322.895	ug/L	8.498	2	314	6355347	2
	Co	59	3.960	ug/L	0.076	1	73	59870	3
>	Ge	72		ug/L			426798	461840	2
	Ni	60	18.651	ug/L	0.525	2	26	53692	2
	Ni	62	18.826	ug/L	0.423	2	48	7762	2
	Cu	63	8.811	ug/L	0.095	1	88	57043	2
	Cu	65	9.082	ug/L	0.339	3	42	26404	3
	Zn	66	92.365	ug/L	2.424	2	141	155957	2
	Zn	67	90.169	ug/L	1 144	1	21	25691	1
	Zn	68	94.985	ug/L	0.518	0	144	116100	2
	As	75	3.470	ug/L	0.050	1	220	5657	1
	As-1	75	3.425	ug/L	0.142	4	9153	15268	1
	Se	82	0.126	ug/L	0.073	58	-1	19	64
	Se	78	0.109	ug/L	0.397	365	9315	10125	1
	Mo	98	0.166	ug/L	0.009	5	35	713	3
	Y	89		ug/L			271155	321510	4
	Kr	83		ug/L			529	629	4
>	In	115		ug/L			840042	858166	0
	Ag	107	0.096	ug/L	0.004	3	32	1105	3
	Cd	111	1.465	ug/L	0.007	0	72	6339	0
	Cd	114	1.426	ug/L	0.027	1	44	15189	1
	Sb	121	-0.002	ug/L	0.002	97	346	328	7
	Sb	123	-0.001	ug/L	0.002	215	257	255	6
	Ba	135	148.076	ug/L	1.233	0	17	571508	1
	Ba	137	146.296	ug/L	1.374	0	19	976685	1
>	Tb	159		ug/L			1001666	1030737	1
	Tl	205	0.131	ug/L	0.004	2	206	4450	2
	Pb	208	67.656	ug/L	0.182	0	157	2792349	1
	Bi	209		ug/L			2293546	2338354	0
	Th	232	1.265	ug/L	0.024	1	1512	51690	0
	U	238	0.204	ug/L	0.001	0	29	8691	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 E SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:56:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

bn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			681751	737913	1
	Be	**9**	**0.116**	ug/L	0.000	0	8	310	1
	C	**13**		ug/L			63994	83267	0
	Cl	**37**		ug/L			3532807	4013072	1
>	**Sc**	**45**		ug/L			674505	866552	0
	V	**51**	**6.037**	ug/L	0.038	0	6013	111311	0
	V-1	**51**	**5.990**	ug/L	0.018	0	387	104121	0
	Cr	**52**	**5.614**	ug/L	0.266	4	17778	106047	2
	Cr	**53**	**5.472**	ug/L	0.164	2	210	9684	2
	Mn	**55**	**192.149**	ug/L	4.445	2	314	3921135	1
	Co	**59**	**2.067**	ug/L	0.068	3	73	32429	2
>	**Ge**	**72**		ug/L			426798	474948	1
	Ni	**60**	**5.060**	ug/L	0.113	2	26	15002	1
	Ni	**62**	**5.058**	ug/L	0.186	3	48	2184	4
	Cu	**63**	**6.086**	ug/L	0.137	2	88	40537	0
	Cu	**65**	**6.066**	ug/L	0.143	2	42	18155	2
	Zn	**66**	**65.633**	ug/L	1.784	2	141	114014	2
	Zn	**67**	**62.057**	ug/L	1.572	2	21	18190	1
	Zn	**68**	**64.714**	ug/L	2.006	3	144	81371	1
	As	**75**	**3.817**	ug/L	0.038	0	220	6376	1
	As-1	**75**	**3.788**	ug/L	0.072	1	9153	16288	0
	Se	**82**	**0.031**	ug/L	0.030	95	-1	3	154
	Se	**78**	**0.017**	ug/L	0.222	1270	9315	10373	0
	Mo	**98**	**0.083**	ug/L	0.002	2	35	388	1
	Y	**89**		ug/L			271155	325507	1
	Kr	**83**		ug/L			529	615	4
>	**In**	**115**		ug/L			840042	870117	0
	Ag	**107**	**0.052**	ug/L	0.003	5	32	625	5
	Cd	**111**	**1.349**	ug/L	0.042	3	72	5923	2
	Cd	**114**	**1.360**	ug/L	0.015	1	44	14692	1
	Sb	**121**	**0.019**	ug/L	0.005	26	346	608	10
	Sb	**123**	**0.015**	ug/L	0.000	1	257	420	0
	Ba	**135**	**57.226**	ug/L	0.643	1	17	223935	0
	Ba	**137**	**57.421**	ug/L	0.347	0	19	388698	1
>	**Tb**	**159**		ug/L			1001666	1035898	0
	Tl	**205**	**0.055**	ug/L	0.001	2	206	1994	2
	Pb	**208**	**52.939**	ug/L	0.657	1	157	2195819	0
	Bi	**209**		ug/L			2293546	2363818	0
	Th	**232**	**1.197**	ug/L	0.012	0	1512	49235	0
	U	**238**	**0.119**	ug/L	0.002	1	29	5122	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:00:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	720498	0
	Be	9	0.541	ug/L	0.006	1	8	1382	0
	C	13		ug/L			63994	107445	2
	Cl	37		ug/L			3532807	4121040	3
>	Sc	45		ug/L			674505	931936	1
	V	51	32.461	ug/L	0.237	0	6013	607360	2
	V-1	51	32.320	ug/L	0.275	0	387	601904	2
	Cr	52	21.186	ug/L	0.290	1	17778	362323	1
	Cr	53	21.029	ug/L	0.446	2	210	39197	1
	Mn	55	497.382	ug/L	12.841	2	314	10912889	0
	Co	59	7.010	ug/L	0.153	2	73	118034	1
>	Ge	72		ug/L			426798	466141	0
	Ni	60	16.891	ug/L	0.264	1	26	49095	1
	Ni	62	18.926	ug/L	0.715	3	48	7877	3
	Cu	63	23.784	ug/L	0.508	2	88	155260	2
	Cu	65	24.689	ug/L	0.258	1	42	72382	0
	Zn	66	198.399	ug/L	6.777	3	141	337982	3
	Zn	67	190.189	ug/L	2.093	1	21	54679	0
	Zn	68	197.196	ug/L	5.571	2	144	243107	2
	As	75	9.829	ug/L	0.138	1	220	15738	0
	As-1	75	9.856	ug/L	0.233	2	9153	25585	0
	Se	82	0.028	ug/L	0.074	260	-1	2	446
	Se	78	0.599	ug/L	0.306	51	9315	10440	0
	Mo	98	0.334	ug/L	0.010	3	35	1412	3
	Y	89		ug/L			271155	432389	0
	Kr	83		ug/L			529	783	4
>	In	115		ug/L			840042	863073	0
	Ag	107	0.188	ug/L	0.007	3	32	2144	3
	Cd	111	3.535	ug/L	0.027	0	72	15272	0
	Cd	114	3.489	ug/L	0.039	1	44	37325	0
	Sb	121	0.124	ug/L	0.020	16	346	1999	13
	Sb	123	0.106	ug/L	0.000	0	257	1333	0
	Ba	135	159.076	ug/L	2.046	1	17	617432	0
	Ba	137	160.467	ug/L	2.127	1	19	1077433	1
>	Tb	159		ug/L			1001666	1030677	0
	Tl	205	0.202	ug/L	0.008	3	206	6738	3
	Pb	208	145.651	ug/L	1.935	1	157	6010697	1
	Bi	209		ug/L			2293546	2267293	2
	Th	232	6.125	ug/L	0.085	1	1512	244331	0
	U	238	0.745	ug/L	0.005	0	29	31742	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 20:04:33

Pb Zn

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	732318	1
	Be	**9**	**0.110**	ug/L	0.002	2	8	294	3
	C	**13**		ug/L			63994	81034	3
	Cl	**37**		ug/L			3532807	4009514	2
>	**Sc**	**45**		ug/L			674505	871538	1
	V	**51**	**9.650**	ug/L	0.287	2	6013	174286	2
	V-1	**51**	**9.656**	ug/L	0.307	3	387	168482	2
	Cr	**52**	**6.254**	ug/L	0.145	2	17778	116204	0
	Cr	**53**	**6.360**	ug/L	0.210	3	210	11275	2
	Mn	**55**	**128.856**	ug/L	3.127	2	314	2644624	1
	Co	**59**	**2.056**	ug/L	0.037	1	73	32449	2
>	**Ge**	**72**		ug/L			426798	480111	1
	Ni	**60**	**3.825**	ug/L	0 105	2	26	11473	2
	Ni	**62**	**4.352**	ug/L	0.083	1	48	1907	2
	Cu	**63**	**8.054**	ug/L	0.055	0	88	54209	0
	Cu	**65**	**8.095**	ug/L	0 262	3	42	24472	3
	Zn	**66**	**80.853**	ug/L	1.959	2	141	141961	2
	Zn	**67**	**75.056**	ug/L	3.424	4	21	22243	5
	Zn	**68**	**80.088**	ug/L	0.201	0	144	101788	1
	As	**75**	**4.526**	ug/L	0.029	0	220	7598	1
	As-1	**75**	**4.451**	ug/L	0.026	0	9153	17547	1
	Se	**82**	**0.052**	ug/L	0.041	78	-1	7	101
	Se	**78**	**-0.095**	ug/L	0.106	112	9315	10435	0
	Mo	**98**	**0.048**	ug/L	0.004	8	35	242	5
	Y	**89**		ug/L			271155	327703	1
	Kr	**83**		ug/L			529	635	3
>	**In**	**115**		ug/L			840042	878881	0
	Ag	**107**	**0.052**	ug/L	0.002	4	32	626	3
	Cd	**111**	**1.996**	ug/L	0.060	3	72	8812	2
	Cd	**114**	**2.039**	ug/L	0.050	2	44	22225	2
	Sb	**121**	**0.051**	ug/L	0.005	8	346	1050	6
	Sb	**123**	**0.055**	ug/L	0.002	4	257	836	3
	Ba	**135**	**25.857**	ug/L	0.470	1	17	102212	1
	Ba	**137**	**25.835**	ug/L	0.426	1	19	176661	1
>	**Tb**	**159**		ug/L			1001666	1031609	0
	Tl	**205**	**0.077**	ug/L	0.001	1	206	2699	1
	Pb	**208**	**81.546**	ug/L	1.090	1	157	3368482	1
	Bi	**209**		ug/L			2293546	2377421	0
	Th	**232**	**1.287**	ug/L	0.012	0	1512	52637	1
	U	**238**	**0.131**	ug/L	0.002	1	29	5624	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:09:45
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	740405	0
	Be	9	0.505	ug/L	0.004	0	8	1324	1
	C	13		ug/L			63994	100426	3
	Cl	37		ug/L			3532807	4050176	1
>	Sc	45		ug/L			674505	961277	2
	V	51	43.288	ug/L	1.144	2	6013	832149	0
	V-1	51	42.977	ug/L	0.918	2	387	825034	0
	Cr	52	28.216	ug/L	1.216	4	17778	489103	2
	Cr	53	27.613	ug/L	0.544	1	210	52993	2
	Mn	55	559.367	ug/L	6.412	1	314	12660873	1
	Co	59	8.740	ug/L	0.280	3	73	151758	2
>	Ge	72		ug/L			426798	467395	0
	Ni	60	18.741	ug/L	0.112	0	26	54616	0
	Ni	62	21.479	ug/L	0.342	1	48	8957	1
	Cu	63	39.057	ug/L	0.180	0	88	255563	0
	Cu	65	38.833	ug/L	0.441	1	42	114126	0
	Zn	66	377.544	ug/L	6.739	1	141	644772	1
	Zn	67	347.059	ug/L	6.578	1	21	100025	1
	Zn	68	366.278	ug/L	3.503	0	144	452630	1
	As	75	21.723	ug/L	0.078	0	220	34584	0
	As-1	75	21.709	ug/L	0.013	0	9153	44453	0
	Se	82	0.070	ug/L	0.037	52	-1	10	62
	Se	78	0.719	ug/L	0.188	26	9315	10522	0
	Mo	98	0.271	ug/L	0.007	2	35	1158	2
	Y	89		ug/L			271155	429096	1
	Kr	83		ug/L			529	836	3
>	In	115		ug/L			840042	898587	1
	Ag	107	0.237	ug/L	0 011	4	32	2810	4
	Cd	111	9.135	ug/L	0.138	1	72	40965	0
	Cd	114	9.045	ug/L	0.147	1	44	100654	0
	Sb	121	0.326	ug/L	0 005	1	346	4869	1
	Sb	123	0.331	ug/L	0.005	1	257	3738	0
	Ba	135	119.456	ug/L	1.495	1	17	482728	0
	Ba	137	120.425	ug/L	0.608	0	19	841862	1
>	Tb	159		ug/L			1001666	1033632	0
	Tl	205	0.390	ug/L	0.006	1	206	12840	1
	Pb	208	406.297	ug/L	3.228	0	157	16814924	0
	Bi	209		ug/L			2293546	2266880	0
	Th	232	6.282	ug/L	0.041	0	1512	251312	0
	U	238	0.616	ug/L	0.015	2	29	26329	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:13:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	728518	1
	Be	9	0.948	ug/L	0.015	1	8	2440	2
	C	13		ug/L			63994	106394	0
	Cl	37		ug/L			3532807	4096322	2
>	Sc	45		ug/L			674505	957979	1
	V	51	35.125	ug/L	1.048	2	6013	674702	2
	V-1	51	34.820	ug/L	0.996	2	387	666353	1
	Cr	52	60.745	ug/L	1.984	3	17778	1020636	2
	Cr	53	59.088	ug/L	1.855	3	210	112661	1
	Mn	55	1301.293	ug/L	40.486	3	314	29350765	2
	Co	59	10.054	ug/L	0.431	4	73	173947	2
>	Ge	72		ug/L			426798	462533	0
	Ni	60	63.963	ug/L	0.422	0	26	184403	1
	Ni	62	65.428	ug/L	0.494	0	48	26895	1
	Cu	63	23.709	ug/L	0.537	2	88	153543	1
	Cu	65	23.930	ug/L	0.557	2	42	69613	2
	Zn	66	297.823	ug/L	6.623	2	141	503343	1
	Zn	67	295.440	ug/L	12.520	4	21	84258	3
	Zn	68	306.585	ug/L	4.290	1	144	374947	1
	As	75	16.588	ug/L	0.301	1	220	26190	1
	As-1	75	16.671	ug/L	0.299	1	9153	36082	0
	Se	82	-0.309	ug/L	0.057	18	-1	-55	17
	Se	78	0.783	ug/L	0.254	32	9315	10440	0
	Mo	98	0.527	ug/L	0.015	2	35	2192	3
	Y	89		ug/L			271155	401332	1
	Kr	83		ug/L			529	913	0
>	In	115		ug/L			840042	841269	1
	Ag	107	0.190	ug/L	0.009	4	32	2112	3
	Cd	111	4.156	ug/L	0.107	2	72	17486	0
	Cd	114	4.109	ug/L	0.170	4	44	42814	2
	Sb	121	0.035	ug/L	0.003	7	346	802	2
	Sb	123	0.036	ug/L	0.003	9	257	606	3
	Ba	135	467.970	ug/L	14.501	3	17	1769878	1
	Ba	137	486.289	ug/L	17.679	3	19	3181171	1
>	Tb	159		ug/L			1001666	1017480	0
	Tl	205	0.237	ug/L	0.005	2	206	7759	2
	Pb	208	188.357	ug/L	2.949	1	157	7673339	1
	Bi	209		ug/L			2293546	2238291	0
	Th	232	5.589	ug/L	0.062	1	1512	220256	0
	U	238	0.546	ug/L	0.011	2	29	22956	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 20:18:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	714361	1
Be	9	53.268	ug/L	1.034	1	8	133969	1
C	13		ug/L			63994	76326	1
Cl	37		ug/L			3532807	4137131	2
Sc	45		ug/L			674505	855160	1
V	51	47.408	ug/L	0.195	0	6013	810376	0
V-1	51	47.387	ug/L	0.470	0	387	809481	0
Cr	52	45.766	ug/L	0.985	2	17778	692107	2
Cr	53	45.741	ug/L	1.073	2	210	77921	1
Mn	55	45.803	ug/L	0.803	1	314	922699	0
Co	59	44.846	ug/L	1.293	2	73	692454	1
Ge	72		ug/L			426798	474413	0
Ni	60	50.448	ug/L	0.383	0	26	149177	0
Ni	62	49.482	ug/L	0.672	1	48	20875	0
Cu	63	50.172	ug/L	0.481	0	88	333185	0
Cu	65	50.316	ug/L	1.174	2	42	150077	1
Zn	66	50.422	ug/L	0.224	0	141	87544	0
Zn	67	49.071	ug/L	0.656	1	21	14376	1
Zn	68	49.689	ug/L	0.038	0	144	62463	0
As	75	49.191	ug/L	0.655	1	220	79178	0
As-1	75	49.295	ug/L	0.419	0	9153	89528	0
Se	82	49.488	ug/L	1.203	2	-1	8709	2
Se	78	49.860	ug/L	0.174	0	9315	32931	0
Mo	98	47.434	ug/L	0.157	0	35	198721	0
Y	89		ug/L			271155	298189	3
Kr	83		ug/L			529	627	2
In	115		ug/L			840042	846625	0
Ag	107	49.032	ug/L	0.701	1	32	541679	2
Cd	111	49.979	ug/L	0.629	1	72	210861	1
Cd	114	50.181	ug/L	0.622	1	44	525990	2
Sb	121	48.950	ug/L	0.492	1	346	636033	0
Sb	123	49.055	ug/L	0.634	1	257	484019	1
Ba	135	48.879	ug/L	0.798	1	17	186108	1
Ba	137	48.817	ug/L	0.347	0	19	321522	0
Tb	159		ug/L			1001666	1023308	1
Tl	205	47.505	ug/L	0.650	1	206	1522946	0
Pb	208	48.658	ug/L	0.540	1	157	1993638	0
Bi	209		ug/L			2293546	2285658	0
Th	232	46.753	ug/L	0.907	1	1512	1841369	0
U	238	50.336	ug/L	2 867	5	29	2126316	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 20:24:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			681751	713347	1
	Be	9	0.002	ug/L	0.002	90	8	14	34
	C	13		ug/L			63994	75773	1
	Cl	37		ug/L			3532807	3901506	1
>	Sc	45		ug/L			674505	834394	2
	V	51	-0.015	ug/L	0.006	38	6013	7190	1
	V-1	51	-0.023	ug/L	0.002	7	387	94	31
	Cr	52	-0.062	ug/L	0.026	42	17778	21104	1
	Cr	53	-0.087	ug/L	0.008	9	210	115	10
	Mn	55	0.020	ug/L	0.031	152	314	796	79
	Co	59	-0.000	ug/L	0.000	94	73	83	10
>	Ge	72		ug/L			426798	458353	1
	Ni	60	-0.002	ug/L	0.003	191	26	23	35
	Ni	62	-0.032	ug/L	0.019	59	48	39	20
	Cu	63	-0.001	ug/L	0.002	116	88	86	12
	Cu	65	0.000	ug/L	0.004	4231	42	45	24
	Zn	66	-0.002	ug/L	0.011	501	141	148	12
	Zn	67	0.007	ug/L	0.012	161	21	25	14
	Zn	68	-0.003	ug/L	0.022	775	144	151	17
	As	75	0.006	ug/L	0.006	94	220	246	3
	As-1	75	0.231	ug/L	0.109	47	9153	10187	0
	Se	82	-0.028	ug/L	0.024	86	-1	-6	60
	Se	78	0.826	ug/L	0.386	46	9315	10364	0
	Mo	98	0.000	ug/L	0.001	752	35	39	10
	Y	89		ug/L			271155	291001	1
	Kr	83		ug/L			529	600	1
>	In	115		ug/L			840042	833657	1
	Ag	107	-0.000	ug/L	0.000	72	32	29	9
	Cd	111	-0.000	ug/L	0.001	550	72	71	6
	Cd	114	-0.001	ug/L	0.001	68	44	29	35
	Sb	121	0.025	ug/L	0.006	23	346	664	10
	Sb	123	0.026	ug/L	0.006	23	257	506	12
	Ba	135	0.010	ug/L	0.015	154	17	53	104
	Ba	137	0.016	ug/L	0.024	149	19	119	125
>	Tb	159		ug/L			1001666	982159	0
	Tl	205	0.007	ug/L	0.006	86	206	403	42
	Pb	208	0.016	ug/L	0.022	142	157	773	113
	Bi	209		ug/L			2293546	2322252	1
	Th	232	0.062	ug/L	0.002	3	1512	3822	2
	U	238	0.001	ug/L	0.001	60	29	87	40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.19.12 **Analyst:** MJJ **Page:** 1 **of** 8

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓-2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{60}Ni, high; ^{67}Zn 120%
		LR200			
		LR300			
		B1			
		B2			
		B3			
		CCV2			
		CCB2			
		VR32 A-L	SWN	100	Ag
		A	↓	20	↓
		ADUP	↓	↓	↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.19.12 **Analyst:** MJJ **Page:** 2 **of** 8

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR32 ASPK	SWN	20	Ag
		B			
		C			
		D			
		E			
		F			
		G			
		CCV3			
		CCB3			
		VR33 MB1	SWN	20	Ag
		MB1SPK			
		VR32 H			
		I			
		J			
		K			
		L		100	V Cr Co
		L		20	Ag
		VR33 C		100	V Cr Co
		C		20	Ag
		CCV4			
		CCB4			
		VR33 A-L	SWN	100	Ag
		A		20	
		ADUP			

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA Analysis Date: 11.19.12

M2 Mexico	Analyst MJT 11.20.12	Peer JT 11-21	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	L
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	VR36, VR37
Matrix Duplicates	✓	✓	VR36
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF VR36, VR37

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, November 19, 2012 12:04:58
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1301
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq Dead Time (ns): 60
Current Dead Time (ns). 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4146.4	4146.431	47.579	1.1	Standard
	Mg	24.0	43116.5	43116.525	277.372	0.6	Standard
	In	114.9	86325.8	86325.763	322.961	0.4	Standard
	Pb	208.0	34073.0	34072.983	125.163	0.4	Standard
	U	238.1	62712.8	62712.771	575.428	0.9	Standard
⌈	CeO	155.9	2052.3	0.024	0.001	5.0	Standard
|>	Ce	139.9	84445.8	84445.846	289.352	0.3	Standard
⌊	Ce++	70.0	1159.2	0.014	0.001	3.9	Standard
	Bkgd	220.0	0.1	0.100	0.149	149.1	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1250.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

ɪtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 11/19/2012 12:04:56 PM
ıd Time: 11/19/2012 12:07:32 PM

ıily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4146.43
Obtained Intensity (Mg 23.985): 43116.52
Obtained Intensity (In 114.904): 86325.76
Obtained Intensity (Pb 207.977): 34072.98
Obtained Intensity (U 238.05): 62712.77
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.024 (=2052.32 / 84445.85)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.014 (=1159.21 / 84445.85)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\DUALDET.swz

art Time: 11/19/2012 11:27:55 AM
d Time: 11/19/2012 11:30:48 AM

tector Voltages - [Passed]
    Pulse Stage Voltage - [Passed] Optimum value(s): 1250
    Analog Stage Voltage - [Passed] Optimum value(s): -1675
    Pulse Stage Voltage (Fine-tune) - [Passed] Optimum value(s): 1250

VR32 : 00139

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 11/19/2012 11:57:57 AM
d Time: 11/19/2012 12:00:10 PM

ss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.704)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.709)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 11/19/2012 12:00:20 PM
d Time: 11/19/2012 12:04:31 PM

toLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.992; Intercept = -12.11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:46:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				923208	0
	Be	9		ug/L				23	24
	C	13		ug/L				82469	2
	Cl	37		ug/L				4833777	2
>	Sc	45		ug/L				1144296	0
	V	51		ug/L				9450	1
	V-1	51		ug/L				48	5
	Cr	52		ug/L				27897	1
	Cr	53		ug/L				145	4
	Mn	55		ug/L				487	5
	Co	59		ug/L				76	23
>	Ge	72		ug/L				608948	1
	Ni	60		ug/L				28	17
	Ni	62		ug/L				64	12
	Cu	63		ug/L				101	7
	Cu	65		ug/L				39	18
	Zn	66		ug/L				991	6
	Zn	67		ug/L				141	4
	Zn	68		ug/L				706	3
	As	75		ug/L				318	3
	As-1	75		ug/L				12623	0
	Se	82		ug/L				-10	161
	Se	78		ug/L				12864	0
	Mo	98		ug/L				28	23
	Y	89		ug/L				406158	1
	Kr	83		ug/L				794	5
>	In	115		ug/L				1093664	0
	Ag	107		ug/L				42	23
	Cd	111		ug/L				115	7
	Cd	114		ug/L				65	11
	Sb	121		ug/L				182	13
	Sb	123		ug/L				151	14
	Ba	135		ug/L				15	20
	Ba	137		ug/L				26	9
>	Tb	159		ug/L				1253683	0
	Tl	205		ug/L				128	15
	Pb	208		ug/L				347	1
	Bi	209		ug/L				2594753	0
	Th	232		ug/L				1408	3
	U	238		ug/L				31	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:50:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			923208	916656	0
Be	9	0.200	ug/L	0.001	0	23	690	1
C	13		ug/L			82469	86121	3
Cl	37		ug/L			4833777	4879558	1
Sc	45		ug/L			1144296	1138804	1
V	51	0.200	ug/L	0.006	3	9450	14094	1
V-1	51	0.200	ug/L	0 008	3	48	4585	2
Cr	52	0.500	ug/L	0.033	6	27897	37414	1
Cr	53	0.500	ug/L	0.032	6	145	1187	4
Mn	55	0.500	ug/L	0.004	0	487	13129	1
Co	59	0.200	ug/L	0.005	2	76	3875	1
Ge	72		ug/L			608948	597664	0
Ni	60	0.500	ug/L	0.006	1	28	2114	0
Ni	62	0.500	ug/L	0.044	8	64	319	6
Cu	63	0.500	ug/L	0.006	1	101	4905	0
Cu	65	0.500	ug/L	0.008	1	39	2155	2
Zn	66	4.000	ug/L	0.089	2	991	10456	1
Zn	67	4.000	ug/L	0.066	1	141	1575	2
Zn	68	4.000	ug/L	0.075	1	706	7362	0
As	75	0.200	ug/L	0.007	3	318	808	1
As-1	75	0.200	ug/L	0.019	9	12623	12962	0
Se	82	0.500	ug/L	0.014	2	-10	140	2
Se	78	0.500	ug/L	0.036	7	12864	13072	0
Mo	98	0.200	ug/L	0.012	6	28	1200	6
Y	89		ug/L			406158	409551	1
Kr	83		ug/L			794	763	2
In	115		ug/L			1093664	1090207	1
Ag	107	0.200	ug/L	0.002	1	42	3242	1
Cd	111	0.100	ug/L	0.007	7	115	698	6
Cd	114	0.100	ug/L	0.004	3	65	1460	3
Sb	121	0.200	ug/L	0.005	2	182	3279	1
Sb	123	0.200	ug/L	0.007	3	151	2451	1
Ba	135	0.500	ug/L	0.020	3	15	2381	3
Ba	137	0.500	ug/L	0.011	2	26	4228	1
Tb	159		ug/L			1253683	1242355	1
Tl	205	0.200	ug/L	0.002	0	128	7365	1
Pb	208	0.100	ug/L	0.003	2	347	5270	1
Bi	209		ug/L			2594753	2571936	0
Th	232	0.200	ug/L	0.011	5	1408	8376	4
U	238	0.200	ug/L	0.005	2	31	9772	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:54:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			923208	933022	1
	Be	**9**	**10.000**	ug/L	0.156	1	23	33700	0
	C	**13**		ug/L			82469	90005	1
	Cl	**37**		ug/L			4833777	4848340	1
>	**Sc**	**45**		ug/L			1144296	1185233	0
	V	**51**	**9.999**	ug/L	0.146	1	9450	224847	1
	V-1	**51**	**10.000**	ug/L	0.150	1	48	215611	1
	Cr	**52**	**9.998**	ug/L	0.204	2	27897	216834	2
	Cr	**53**	**10.000**	ug/L	0.052	0	145	21548	0
	Mn	**55**	**9.999**	ug/L	0.119	1	487	255385	0
	Co	**59**	**10.000**	ug/L	0 167	1	76	189731	1
>	**Ge**	**72**		ug/L			608948	614297	2
	Ni	**60**	**9.999**	ug/L	0.343	3	28	41277	2
	Ni	**62**	**10.002**	ug/L	0.440	4	64	5796	1
	Cu	**63**	**9.998**	ug/L	0.340	3	101	92665	0
	Cu	**65**	**9.999**	ug/L	0 249	2	39	41708	0
	Zn	**66**	**9.957**	ug/L	0.183	1	991	24632	0
	Zn	**67**	**10.065**	ug/L	0.287	2	141	4011	1
	Zn	**68**	**9.966**	ug/L	0.198	1	706	17432	0
	As	**75**	**9.999**	ug/L	0.157	1	318	22230	1
	As-1	**75**	**9.998**	ug/L	0.282	2	12623	33705	0
	Se	**82**	**9.996**	ug/L	0.227	2	-10	2688	1
	Se	**78**	**9.986**	ug/L	0.614	6	12864	18883	0
	Mo	**98**	**10.000**	ug/L	0.238	2	28	59088	0
	Y	**89**		ug/L			406158	417433	0
	Kr	**83**		ug/L			794	783	2
>	**In**	**115**		ug/L			1093664	1113587	1
	Ag	**107**	**10.000**	ug/L	0.200	2	42	161065	0
	Cd	**111**	**10.000**	ug/L	0.133	1	115	56991	0
	Cd	**114**	**10.000**	ug/L	0.167	1	65	138401	0
	Sb	**121**	**10.000**	ug/L	0.202	2	182	161865	0
	Sb	**123**	**10.000**	ug/L	0.221	2	151	123040	0
	Ba	**135**	**10.000**	ug/L	0.092	0	15	48834	1
	Ba	**137**	**10.000**	ug/L	0.205	2	26	84620	0
>	**Tb**	**159**		ug/L			1253683	1282920	1
	Tl	**205**	**10.000**	ug/L	0.220	2	128	363752	0
	Pb	**208**	**10.000**	ug/L	0.102	1	347	477727	0
	Bi	**209**		ug/L			2594753	2636223	1
	Th	**232**	**10.001**	ug/L	0.251	2	1408	447555	0
	U	**238**	**10.000**	ug/L	0.082	0	31	495377	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:59:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			923208	937495	2
[	Be	9	19.889	ug/L	0.626	3	23	65838	0
	C	13		ug/L			82469	83760	1
	Cl	37		ug/L			4833777	5015006	1
[>	Sc	45		ug/L			1144296	1203031	2
[	V	51	19.927	ug/L	0.871	4	9450	438457	2
[	V-1	51	19.937	ug/L	0.796	3	48	430653	2
[	Cr	52	19.882	ug/L	0.726	3	27897	399736	1
[	Cr	53	19.915	ug/L	0.482	2	145	42674	1
[	Mn	55	19.903	ug/L	0.250	1	487	505631	0
[	Co	59	19.922	ug/L	0.365	1	76	377606	1
[>	Ge	72		ug/L			608948	619427	0
[	Ni	60	19.872	ug/L	0.586	2	28	80662	2
[	Ni	62	19.978	ug/L	0.244	1	64	11568	1
[	Cu	63	19.942	ug/L	0.491	2	101	184224	1
[	Cu	65	20.000	ug/L	0.326	1	39	84104	0
[	Zn	66	19.915	ug/L	0.206	1	991	48000	1
[	Zn	67	20.172	ug/L	0.803	3	141	8202	3
[	Zn	68	19.995	ug/L	0.271	1	706	34526	0
[	As	75	19.962	ug/L	0.565	2	318	44100	2
[	As-1	75	19.960	ug/L	0.629	3	12623	54733	1
[	Se	82	19.945	ug/L	0.211	1	-10	5362	0
[	Se	78	19.937	ug/L	0.371	1	12864	24837	0
[	Mo	98	19.937	ug/L	0.313	1	28	117336	2
	Y	89		ug/L			406158	415025	1
	Kr	83		ug/L			794	787	2
[>	In	115		ug/L			1093664	1107288	0
[	Ag	107	19.960	ug/L	0.354	1	42	317113	0
[	Cd	111	19.974	ug/L	0.345	1	115	112498	0
[	Cd	114	20.013	ug/L	0.131	0	65	276096	0
[	Sb	121	19.987	ug/L	0.158	0	182	320751	0
[	Sb	123	19.979	ug/L	0.469	2	151	243251	1
[	Ba	135	19.995	ug/L	0.081	0	15	96982	0
[	Ba	137	19.998	ug/L	0.357	1	26	168205	0
[>	Tb	159		ug/L			1253683	1280440	0
[	Tl	205	19.969	ug/L	0.161	0	128	720533	0
[	Pb	208	19.963	ug/L	0.052	0	347	944606	0
[	Bi	209		ug/L			2594753	2596363	0
[	Th	232	20.056	ug/L	0.181	0	1408	904639	0
[	U	238	20.006	ug/L	0.139	0	31	990473	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:03:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	911518	1
[	Be	9	50.045	ug/L	2.119	4	23	161803	3
	C	13		ug/L			82469	83061	1
	Cl	37		ug/L			4833777	5004130	5
[>	Sc	45		ug/L			1144296	1184686	0
[	V	51	50.120	ug/L	0.361	0	9450	1084559	0
[	V-1	51	50.086	ug/L	0.412	0	48	1074978	0
[	Cr	52	49.887	ug/L	0.094	0	27897	934278	0
[	Cr	53	49.773	ug/L	0.418	0	145	102509	0
[	Mn	55	49.918	ug/L	0.896	1	487	1238108	1
[	Co	59	49.943	ug/L	0.602	1	76	927044	1
[>	Ge	72		ug/L			608948	607610	1
[	Ni	60	49.876	ug/L	1.024	2	28	196115	1
[	Ni	62	50.026	ug/L	1.149	2	64	28384	1
[	Cu	63	49.887	ug/L	1.101	2	101	446839	0
[	Cu	65	49.734	ug/L	1.230	2	39	199762	1
[	Zn	66	49.933	ug/L	0.671	1	991	115798	0
[	Zn	67	49.713	ug/L	1 031	2	141	19096	1
[	Zn	68	49.986	ug/L	0.603	1	706	83500	2
[	As	75	49.938	ug/L	1.770	3	318	107048	1
[	As-1	75	50.045	ug/L	1.759	3	12623	116073	1
[	Se	82	49.796	ug/L	1.538	3	-10	12880	1
[	Se	78	50.169	ug/L	1.464	2	12864	42334	0
[	Mo	98	49.962	ug/L	1.784	3	28	287164	1
	Y	89		ug/L			406158	412798	2
	Kr	83		ug/L			794	791	2
[>	In	115		ug/L			1093664	1079743	1
[	Ag	107	49.877	ug/L	2.008	4	42	763150	3
[	Cd	111	49.824	ug/L	0.674	1	115	268740	0
[	Cd	114	49.985	ug/L	1.102	2	65	671190	0
[	Sb	121	49.988	ug/L	1.069	2	182	780941	0
[	Sb	123	50.068	ug/L	0.954	1	151	598285	0
[	Ba	135	50.121	ug/L	1.315	2	15	239860	1
[	Ba	137	50.110	ug/L	0.856	1	26	415503	0
[>	Tb	159		ug/L			1253683	1247857	0
[	Tl	205	49.987	ug/L	0.044	0	128	1755322	0
[	Pb	208	50.066	ug/L	0.824	1	347	2323392	0
[	Bi	209		ug/L			2594753	2495502	0
[	Th	232	50.402	ug/L	0.938	1	1408	2306099	1
[	U	238	50.285	ug/L	0.896	1	31	2497066	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:09:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	891313	0
	Be	9	99.947	ug/L	0.244	0	23	315511	1
	C	13		ug/L			82469	84738	3
	Cl	37		ug/L			4833777	4953154	4
>	Sc	45		ug/L			1144296	1167146	1
	V	51	100.712	ug/L	0.245	0	9450	2189113	1
	V-1	51	100.754	ug/L	0.568	0	48	2185272	1
	Cr	52	100.321	ug/L	1.200	1	27897	1841514	1
	Cr	53	100.463	ug/L	1.519	1	145	206862	0
	Mn	55	100.840	ug/L	2.009	1	487	2534283	1
	Co	59	100.319	ug/L	0.762	0	76	1854091	0
>	Ge	72		ug/L			608948	596637	0
	Ni	60	99.944	ug/L	0.886	0	28	385176	0
	Ni	62	99.733	ug/L	2.716	2	64	55023	2
	Cu	63	99.895	ug/L	1.732	1	101	875624	1
	Cu	65	99.356	ug/L	0.798	0	39	383683	0
	Zn	66	99.899	ug/L	0.507	0	991	225790	0
	Zn	67	100.202	ug/L	3.382	3	141	37918	3
	Zn	68	99.390	ug/L	0.979	0	706	159140	0
	As	75	99.775	ug/L	0.281	0	318	208226	0
	As-1	75	100.010	ug/L	0 095	0	12623	215568	0
	Se	82	99.169	ug/L	0.106	0	-10	24527	0
	Se	78	99.962	ug/L	0 786	0	12864	70265	1
	Mo	98	99.697	ug/L	0.955	0	28	557227	0
	Y	89		ug/L			406158	413954	1
	Kr	83		ug/L			794	827	5
>	In	115		ug/L			1093664	1074124	0
	Ag	107	99.437	ug/L	0.075	0	42	1485876	0
	Cd	111	99.398	ug/L	0.423	0	115	522801	0
	Cd	114	99.030	ug/L	1.494	1	65	1281577	0
	Sb	121	99.740	ug/L	0.719	0	182	1536871	0
	Sb	123	99.505	ug/L	0.866	0	151	1163696	0
	Ba	135	99.804	ug/L	1.250	1	15	472155	0
	Ba	137	99.870	ug/L	0.938	0	26	820330	0
>	Tb	159		ug/L			1253683	1263879	0
	Tl	205	99.748	ug/L	0.778	0	128	3517940	0
	Pb	208	99.382	ug/L	1.047	1	347	4576949	0
	Bi	209		ug/L			2594753	2422857	0
	Th	232	99.471	ug/L	0.611	0	1408	4528886	0
	U	238	99.102	ug/L	1.179	1	31	4840021	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:16:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	904911	0
	Be	9	0.003	ug/L	0.006	212	23	31	56
	C	13		ug/L			82469	82087	1
	Cl	37		ug/L			4833777	4891658	5
>	Sc	45		ug/L			1144296	1137530	2
	V	51	0.012	ug/L	0.012	99	9450	9645	0
	V-1	51	0.003	ug/L	0.004	131	48	116	77
	Cr	52	0.033	ug/L	0.043	131	27897	28298	0
	Cr	53	0.003	ug/L	0.004	143	145	150	2
	Mn	55	0.003	ug/L	0.005	159	487	554	20
	Co	59	0.002	ug/L	0.004	207	76	109	64
>	Ge	72		ug/L			608948	611501	1
	Ni	60	0.003	ug/L	0.002	73	28	40	22
	Ni	62	0.408	ug/L	0.171	41	64	295	34
	Cu	63	0.035	ug/L	0.011	31	101	420	25
	Cu	65	0.005	ug/L	0.001	30	39	59	11
	Zn	66	-0.000	ug/L	0.020	879230	991	994	3
	Zn	67	0.000	ug/L	0.016	6982	141	142	4
	Zn	68	0.013	ug/L	0.042	319	706	730	7
	As	75	-0.015	ug/L	0.008	50	318	287	4
	As-1	75	-0.100	ug/L	0.177	176	12623	12464	1
	Se	82	-0.021	ug/L	0.044	205	-10	-15	70
	Se	78	-0.352	ug/L	0.605	171	12864	12706	1
	Mo	98	0.020	ug/L	0.010	50	28	142	42
	Y	89		ug/L			406158	400033	1
	Kr	83		ug/L			794	773	4
>	In	115		ug/L			1093664	1082037	1
	Ag	107	0.006	ug/L	0.007	125	42	125	82
	Cd	111	0.005	ug/L	0.007	142	115	141	26
	Cd	114	0.004	ug/L	0.006	147	65	114	62
	Sb	121	0.105	ug/L	0.005	5	182	1816	5
	Sb	123	0.101	ug/L	0.003	3	151	1341	1
	Ba	135	0.008	ug/L	0.014	182	15	50	128
	Ba	137	0.008	ug/L	0.013	153	26	93	110
>	Tb	159		ug/L			1253683	1223630	0
	Tl	205	0.019	ug/L	0.007	35	128	769	29
	Pb	208	0.006	ug/L	0.009	152	347	598	65
	Bi	209		ug/L			2594753	2527112	0
	Th	232	0.139	ug/L	0.003	2	1408	7520	1
	U	238	0.007	ug/L	0 006	84	31	365	77

Sample Information

Sample Date/Time: Monday, November 19, 2012 13:16:44
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.019	0.20	10	20	50	100
V-1	51	**0.9999**	0.019	0.20	10	20	50	100
Cr	52	**1.0000**	0.015	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9999**	0.022	0.50	10	20	50	100
Co	59	**1.0000**	0.016	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.015	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9998**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.028	0.20	10	20	50	100
Pb	208	**0.9999**	0.036	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.036	0.20	10	20	50	100
U	238	**0.9998**	0.039	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:23:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	903111	0
[	Be	9	51.117	ug/L	0.622	1	23	163510	1
	C	13		ug/L			82469	82989	2
	Cl	37		ug/L			4833777	4812852	2
[>	Sc	45		ug/L			1144296	1175181	1
[	V	51	51.435	ug/L	1.217	2	9450	1130276	1
[	V-1	51	51.240	ug/L	0.749	1	48	1118939	0
[	Cr	52	51.489	ug/L	1 729	3	27897	965406	2
[	Cr	53	50.829	ug/L	0.599	1	145	105465	1
[	Mn	55	50.716	ug/L	1.041	2	487	1283580	1
[	Co	59	50.784	ug/L	0.616	1	76	945168	1
[>	Ge	72		ug/L			608948	598084	1
[	Ni	60	52.750	ug/L	1.733	3	28	203725	1
[	Ni	62	51.489	ug/L	1.734	3	64	28496	1
[	Cu	63	52.429	ug/L	0.666	1	101	460669	0
[	Cu	65	52.275	ug/L	1.631	3	39	202300	1
[	Zn	66	51.456	ug/L	1.176	2	991	117026	1
[	Zn	67	51.109	ug/L	1.152	2	141	19451	2
[	Zn	68	50.855	ug/L	1.384	2	706	81948	2
[	As	75	53.304	ug/L	0.858	1	318	111639	1
[	As-1	75	52.475	ug/L	0.684	1	12623	119257	0
[	Se	82	80.661	ug/L	2.056	2	-10	19991	1
[	Se	78	80.195	ug/L	1.630	2	12864	58993	0
[	Mo	98	49.736	ug/L	0.966	1	28	278618	0
	Y	89		ug/L			406158	403288	2
	Kr	83		ug/L			794	795	5
[>	In	115		ug/L			1093664	1073418	0
[	Ag	107	51.463	ug/L	0.683	1	42	768584	2
[	Cd	111	50.824	ug/L	0.277	0	115	267206	1
[	Cd	114	51.560	ug/L	0.734	1	65	666824	0
[	Sb	121	50.588	ug/L	0.440	0	182	779044	0
[	Sb	123	50.247	ug/L	0.456	0	151	587292	0
[	Ba	135	51.509	ug/L	0.384	0	15	243525	0
[	Ba	137	51.210	ug/L	0.517	1	26	420376	0
[>	Tb	159		ug/L			1253683	1249512	0
[	Tl	205	50.951	ug/L	0.609	1	128	1776517	0
[	Pb	208	51.578	ug/L	0.119	0	347	2348564	0
[	Bi	209		ug/L			2594753	2479132	0
[	Th	232	53.164	ug/L	0.470	0	1408	2393602	0
[	U	238	52.927	ug/L	0 307	0	31	2555643	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:30:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
>	Li	6		ug/L			923208	871631	✓	0
	Be	9	-0.001	ug/L	0.001	61	23	18		13
	C	13		ug/L			82469	80983		1
	Cl	37		ug/L			4833777	4967047		4
>	Sc	45		ug/L			1144296	1115915	✓	0
	V	51	0.018	ug/L	0.011	61	9450	9587		1
	V-1	51	0.001	ug/L	0.000	68	48	60		14
	Cr	52	0.063	ug/L	0.048	75	27897	28286		2
	Cr	53	0.004	ug/L	0.013	348	145	149		17
	Mn	55	-0.001	ug/L	0.001	38	487	443		3
	Co	59	-0.000	ug/L	0.001	312	76	69		20
>	Ge	72		ug/L			608948	593285	✓	1
	Ni	60	-0.000	ug/L	0.001	211	28	26		9
	Ni	62	0.036	ug/L	0.035	97	64	82		23
	Cu	63	0.004	ug/L	0.002	50	101	130		11
	Cu	65	0.001	ug/L	0.001	71	39	43		8
	Zn	66	-0.226	ug/L	0.016	7	991	459		6
	Zn	67	-0.174	ug/L	0.031	17	141	73		16
	Zn	68	-0.187	ug/L	0.007	3	706	391		1
	As	75	-0.021	ug/L	0.010	48	318	265		7
	As-1	75	0.025	ug/L	0.082	325	12623	12348		0
	Se	82	0.022	ug/L	0.009	42	-10	-4		48
	Se	78	0.147	ug/L	0.287	194	12864	12617		0
	Mo	98	0.007	ug/L	0.001	18	28	67		9
	Y	89		ug/L			406158	389844		0
	Kr	83		ug/L			794	743		2
>	In	115		ug/L			1093664	1053146	✓	0
	Ag	107	0.001	ug/L	0.000	52	42	51		11
	Cd	111	0.000	ug/L	0.001	950	115	112		5
	Cd	114	0.000	ug/L	0.000	137	65	67		9
	Sb	121	0.030	ug/L	0.007	23	182	628		16
	Sb	123	0.033	ug/L	0.007	21	151	520		15
	Ba	135	-0.000	ug/L	0.001	498	15	13		27
	Ba	137	-0.000	ug/L	0.000	455	26	24		12
>	Tb	159		ug/L			1253683	1184900	✓	0
	Tl	205	0.004	ug/L	0.002	56	128	238		27
	Pb	208	-0.002	ug/L	0.000	16	347	243		6
	Bi	209		ug/L			2594753	2487094		1
	Th	232	0.066	ug/L	0.004	5	1408	4129		3
	U	238	0.002	ug/L	0.000	9	31	119		7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:34:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	903770	1
	Be	9	49.292	ug/L	0.322	0	23	157786	1
	C	13		ug/L			82469	82319	0
	Cl	37		ug/L			4833777	5034935	2
>	Sc	45		ug/L			1144296	1164608	2
	V	51	49.502	ug/L	0.801	1	9450	1078385	1
	V-1	51	49.270	ug/L	0 817	1	48	1066159	0
	Cr	52	50.491	ug/L	1.135	2	27897	938707	0
	Cr	53	49.702	ug/L	1.513	3	145	102164	1
	Mn	55	50.238	ug/L	1.326	2	487	1259770	0
	Co	59	50.096	ug/L	2.710	5	76	923286	3
>	Ge	72		ug/L			608948	604825	1
	Ni	60	50.353	ug/L	0.844	1	28	196710	0
	Ni	62	48.935	ug/L	1.020	2	64	27406	3
	Cu	63	49.563	ug/L	0.776	1	101	440470	1
	Cu	65	49.974	ug/L	1.047	2	39	195622	1
	Zn	66	50.592	ug/L	1.292	2	991	116384	1
	Zn	67	49.942	ug/L	0.643	1	141	19226	1
	Zn	68	50.564	ug/L	0.999	1	706	82418	2
	As	75	49.244	ug/L	0.569	1	318	104334	0
	As-1	75	49.200	ug/L	0.783	1	12623	113865	1
	Se	82	49.798	ug/L	0.543	1	-10	12479	0
	Se	78	49.668	ug/L	1.030	2	12864	41815	0
	Mo	98	49.128	ug/L	0.707	1	28	278384	2
	Y	89		ug/L			406158	402489	0
	Kr	83		ug/L			794	786	2
>	In	115		ug/L			1093664	1081977	1
	Ag	107	48.455	ug/L	0.279	0	42	729392	1
	Cd	111	50.372	ug/L	0.362	0	115	266923	1
	Cd	114	49.864	ug/L	0.870	1	65	650000	0
	Sb	121	49.896	ug/L	0.659	1	182	774476	0
	Sb	123	49.713	ug/L	1.122	2	151	585601	0
	Ba	135	49.565	ug/L	0.563	1	15	236196	0
	Ba	137	49.424	ug/L	0.770	1	26	408907	0
>	Tb	159		ug/L			1253683	1244702	1
	Tl	205	49.671	ug/L	0.616	1	128	1725042	0
	Pb	208	49.921	ug/L	0.895	1	347	2263908	0
	Bi	209		ug/L			2594753	2485023	1
	Th	232	51.200	ug/L	0.961	1	1408	2295886	0
	U	238	51.258	ug/L	1.339	2	31	2464617	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:41:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			923208	891325	1
	Be	9	0.000	ug/L	0.002	3213	23	23	22
	C	13		ug/L			82469	80818	0
	Cl	37		ug/L			4833777	4842105	2
>	Sc	45		ug/L			1144296	1125646	1
	V	51	0.013	ug/L	0.012	88	9450	9570	1
	V-1	51	0.001	ug/L	0.001	150	48	68	47
	Cr	52	0.042	ug/L	0.051	120	27897	28166	1
	Cr	53	0.001	ug/L	0.006	1062	145	144	7
	Mn	55	-0.000	ug/L	0.001	225	487	469	4
	Co	59	0.000	ug/L	0.001	325	76	81	27
>	Ge	72		ug/L			608948	593415	1
	Ni	60	0.001	ug/L	0.001	44	28	32	7
	Ni	62	0.021	ug/L	0.011	53	64	74	7
	Cu	63	0.003	ug/L	0.001	32	101	125	5
	Cu	65	0.002	ug/L	0.003	182	39	46	29
	Zn	66	-0.218	ug/L	0.007	3	991	477	2
	Zn	67	-0.184	ug/L	0.016	8	141	69	7
	Zn	68	-0.190	ug/L	0.021	10	706	387	7
	As	75	-0.008	ug/L	0.015	186	318	293	11
	As-1	75	0.059	ug/L	0.055	93	12623	12419	0
	Se	82	0.024	ug/L	0.090	372	-10	-3	578
	Se	78	0.235	ug/L	0.231	98	12864	12670	0
	Mo	98	0.007	ug/L	0.002	21	28	68	12
	Y	89		ug/L			406158	395355	2
	Kr	83		ug/L			794	754	6
>	In	115		ug/L			1093664	1067229	0
	Ag	107	0.000	ug/L	0.001	139	42	47	18
	Cd	111	0.002	ug/L	0.001	81	115	121	6
	Cd	114	-0.000	ug/L	0.001	2577	65	63	13
	Sb	121	0.054	ug/L	0.004	7	182	1006	6
	Sb	123	0.056	ug/L	0.007	12	151	795	10
	Ba	135	0.000	ug/L	0.002	568	15	16	48
	Ba	137	0.001	ug/L	0.003	258	26	36	75
>	Tb	159		ug/L			1253683	1205647	0
	Tl	205	0.010	ug/L	0.005	50	128	467	37
	Pb	208	-0.000	ug/L	0.004	38391	347	333	50
	Bi	209		ug/L			2594753	2504883	1
	Th	232	0.103	ug/L	0.005	4	1408	5830	3
	U	238	0.004	ug/L	0.003	72	31	202	61

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:45:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	893134 ✓	0
[	Be	9	0.199	ug/L	0.012	5	23	651	5
	C	13		ug/L			82469	83117	0
	Cl	37		ug/L			4833777	4902719	5
[>	Sc	45		ug/L			1144296	1124137 ✓	1
[	V	51	0.235	ug/L	0.023	9	9450	14182	2
[	V-1	51	0.216	ug/L	0.005	2	48	4557	1
[	Cr	52	0.578	ug/L	0.083	14	27897	37456	2
[	Cr	53	0.511	ug/L	0.016	3	145	1154	1
[	Mn	55	0.507	ug/L	0.010	1	487	12743	0
[	Co	59	0.208	ug/L	0.008	3	76	3770	5
[>	Ge	72		ug/L			608948	597789 ✓	0
[	Ni	60	0.505	ug/L	0.021	4	28	1976	3
[	Ni	62	0.483	ug/L	0.035	7	64	329	5
[	Cu	63	0.533	ug/L	0.009	1	101	4781	1
[	Cu	65	0.530	ug/L	0.005	1	39	2089	0
[	Zn	66	4.118	ug/L	0.010	0	991	10259	1
[	Zn	67	3.751	ug/L	0.123	3	141	1555	2
[	Zn	68	4.057	ug/L	0.160	3	706	7173	2
[	As	75	0.203	ug/L	0.018	8	318	736	4
[	As-1	75	0.184	ug/L	0.097	52	12623	12765	0
[	Se	82	0.568	ug/L	0.090	15	-10	130	16
[	Se	78	0.452	ug/L	0.334	73	12864	12889	0
[	Mo	98	0.193	ug/L	0.010	5	28	1108	6
	Y	89		ug/L			406158	387932	1
	Kr	83		ug/L			794	720	0
[>	In	115		ug/L			1093664	1069689 ✓	1
[	Ag	107	0.205	ug/L	0.008	3	42	3094	2
[	Cd	111	0.105	ug/L	0.002	1	115	665	1
[	Cd	114	0.107	ug/L	0.002	1	65	1439	0
[	Sb	121	0.208	ug/L	0.003	1	182	3364	0
[	Sb	123	0.204	ug/L	0.005	2	151	2527	2
[	Ba	135	0.497	ug/L	0.016	3	15	2358	2
[	Ba	137	0.506	ug/L	0.014	2	26	4163	2
[>	Tb	159		ug/L			1253683	1219587 ✓	1
[	Tl	205	0.210	ug/L	0.004	1	128	7284	1
[	Pb	208	0.107	ug/L	0.004	3	347	5075	2
[	Bi	209		ug/L			2594753	2520245	0
[	Th	232	0.200	ug/L	0.003	1	1408	10148	2
[	U	238	0.202	ug/L	0.002	1	31	9555	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:49:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	933240 ✓	2
	Be	9	0.002	ug/L	0.001	79	23	30	17
	C	13		ug/L			82469	161933	1
	Cl	37		ug/L			4833777	13649840	2
>	Sc	45		ug/L			1144296	1196251 ✓	0
	V	51	0.187	ug/L	0.050	26	9450	14016	7
	V-1	51	1.309	ug/L	0.042	3	48	29155	2
	Cr	52	0.621	ug/L	0.056	9	27897	40663	1
	Cr	53	4.402	ug/L	0.161	3	145	9436	3
	Mn	55	0.075	ug/L	0.004	4	487	2431	3
	Co	59	0.027	ug/L	0.002	9	76	595	8
>	Ge	72		ug/L			608948	596554 ✓	1
	Ni	60	0.417	ug/L	0.017	4	28	1634	2
	Ni	62	3.824	ug/L	0.748	19	64	2171	19
	Cu	63	1.162	ug/L	0.072	6	101	10282	6
	Cu	65	0.426	ug/L	0.009	2	39	1683	1
	Zn	66	1.325	ug/L	0.072	5	991	3951	2
	Zn	67	7.599	ug/L	0.185	2	141	3002	1
	Zn	68	0.854	ug/L	0.051	5	706	2053	3
	As	75	0.030	ug/L	0.073	244	318	375	41
	As-1	75	0.288	ug/L	0.077	26	12623	12949	1
	Se	82	-0.290	ug/L	0.070	24	-10	-81	22
	Se	78	1.045	ug/L	0.367	35	12864	13203	0
	Mo	98	426.179 ✓	ug/L	8.621	2	28	2381373	1
	Y	89		ug/L			406158	410661	1
	Kr	83		ug/L			794	1112	4
>	In	115		ug/L			1093664	1090181 ✓	0
	Ag	107	0.031	ug/L	0.001	2	42	509	2
	Cd	111	0.103	ug/L	0.001	0	115	664	0
	Cd	114	0.258	ug/L	0.011	4	65	3457	4
	Sb	121	0.089	ug/L	0.004	4	182	1580	4
	Sb	123	0.088	ug/L	0.003	3	151	1192	2
	Ba	135	0.061	ug/L	0.006	10	15	307	10
	Ba	137	0.050	ug/L	0.001	2	26	444	2
>	Tb	159		ug/L			1253683	1301318 ✓	0
	Tl	205	0.041	ug/L	0.001	2	128	1613	1
	Pb	208	0.037	ug/L	0.000	0	347	2121	0
	Bi	209		ug/L			2594753	2448513	0
	Th	232	0.275	ug/L	0.088	31	1408	14386	29
	U	238	0.017	ug/L	0 001	7	31	880	6

VR32 : 08155

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:55:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			923208	949106	1
[	Be	9	-0.001	ug/L	0.001	98	23	22	6
	C	13		ug/L			82469	163573	1
	Cl	37		ug/L			4833777	13472299	4
[>	Sc	45		ug/L			1144296	1183191	1
[	V	51	0.139	ug/L	0.197	142	9450	12798	33
[	V-1	51	1.313	ug/L	0.034	2	48	28915	1
[	Cr	52	20.777	ug/L	0.707	3	27897	409402	1
[	Cr	53	24.580	ug/L	0.561	2	145	51416	1
[	Mn	55	18.962	ug/L	0.468	2	487	483444	1
[	Co	59	19.414	ug/L	0.598	3	76	363711	1
[>	Ge	72		ug/L			608948	582334	2
[	Ni	60	20.631	ug/L	0.605	2	28	77584	0
[	Ni	62	24.400	ug/L	0.644	2	64	13190	4
[	Cu	63	20.840	ug/L	0.408	1	101	178325	1
[	Cu	65	20.444	ug/L	0.646	3	39	77041	0
[	Zn	66	19.923	ug/L	1.212	6	991	44661	3
[	Zn	67	24.004	ug/L	1.174	4	141	8961	3
[	Zn	68	18.896	ug/L	0.630	3	706	30060	0
[	As	75	19.324	ug/L	0.577	2	318	39585	0
[	As-1	75	20.242	ug/L	0.731	3	12623	52186	0
[	Se	82	-0.310	ug/L	0.054	17	-10	-84	15
[	Se	78	1.613	ug/L	0.486	30	12864	13206	1
[	Mo	98	433.367	ug/L	7.246	1	28	2363357	1
	Y	89		ug/L			406158	411500	0
	Kr	83		ug/L			794	1091	4
[>	In	115		ug/L			1093664	1091485	0
[	Ag	107	20.390	ug/L	0.400	1	42	309611	1
[	Cd	111	19.630	ug/L	0.220	1	115	105001	0
[	Cd	114	19.864	ug/L	0.154	0	65	261299	1
[	Sb	121	0.062	ug/L	0.002	3	182	1158	3
[	Sb	123	0.063	ug/L	0.002	3	151	896	2
[	Ba	135	0.055	ug/L	0.004	7	15	278	7
[	Ba	137	0.043	ug/L	0.001	3	26	383	2
[>	Tb	159		ug/L			1253683	1319580	0
[	Tl	205	0.031	ug/L	0.001	3	128	1272	3
[	Pb	208	0.028	ug/L	0.001	3	347	1694	2
[	Bi	209		ug/L			2594753	2456397	0
[	Th	232	0.083	ug/L	0.013	15	1408	5408	11
[	U	238	0.000	ug/L	0.000	120	31	36	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:02:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
⌈>	Li	6		ug/L			923208	885249	2
⌊	Be	9	192.971	ug/L	1.965	1	23	604913	1
	C	13		ug/L			82469	83802	0
	Cl	37		ug/L			4833777	4959944	1
⌈>	Sc	45		ug/L			1144296	1101531	0
|	V	51	202.468	ug/L	6.462	3	9450	4143661	2
|	V-1	51	202.615	ug/L	6.101	3	48	4147011	2
|	Cr	52	204.853	ug/L	3.623	1	27897	3520765	1
|	Cr	53	205.331	ug/L	3.024	1	145	398917	1
|	Mn	55	200.642	ug/L	5.411	2	487	4758412	1
⌊	Co	59	203.718	ug/L	2.196	1	76	3553563	1
⌈>	Ge	72		ug/L			608948	557620	1
|	Ni	60	198.875	ug/L	7.392	3	28	716041	2
|	Ni	62	199.749	ug/L	4.254	2	64	102923	1
|	Cu	63	195.425	ug/L	2.883	1	101	1600798	1
|	Cu	65	198.990	ug/L	3.498	1	39	718014	0
|	Zn	66	194.019	ug/L	6.246	3	991	408862	1
|	Zn	67	196.969	ug/L	5.568	2	141	69509	1
|	Zn	68	194.304	ug/L	5.991	3	706	290053	1
|	As	75	201.660	ug/L	4.999	2	318	392957	1
|	As-1	75	201.744	ug/L	5.555	2	12623	394566	1
|	Se	82	196.736	ug/L	2.658	1	-10	45480	0
|	Se	78	196.909	ug/L	3.705	1	12864	117908	0
⌊	Mo	98	219.763	ug/L	5.564	2	28	1147654	1
	Y	89		ug/L			406158	381681	1
	Kr	83		ug/L			794	1006	1
⌈>	In	115		ug/L			1093664	1041060	0
|	Ag	107	200.670	ug/L	3.486	1	42	2905953	0
|	Cd	111	196.310	ug/L	3.041	1	115	1000550	0
|	Cd	114	203.688	ug/L	3.325	1	65	2554692	0
|	Sb	121	206.075	ug/L	2.958	1	182	3077238	0
|	Sb	123	207.014	ug/L	2.378	1	151	2346177	0
|	Ba	135	207.696	ug/L	3.195	1	15	952347	1
⌊	Ba	137	207.820	ug/L	3.354	1	26	1654389	1
⌈>	Tb	159		ug/L			1253683	1246595	1
|	Tl	205	199.665	ug/L	2.235	1	128	6944940	0
|	Pb	208	199.782	ug/L	2.153	1	347	9074007	0
|	Bi	209		ug/L			2594753	2346766	1
|	Th	232	198.762	ug/L	2.437	1	1408	8923629	0
⌊	U	238	198.065	ug/L	3.404	1	31	9539862	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:09:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			923208	839331	1
[	Be	9	284.060	ug/L	5.216	1	23	844472	2
	C	13		ug/L			82469	85852	3
	Cl	37		ug/L			4833777	4820895	3
[>	Sc	45		ug/L			1144296	1079541	1
[	V	51	314.543	ug/L	4.447	1	9450	6304538	1
[	V-1	51	312.658	ug/L	5.271	1	48	6271957	1
[	Cr	52	309.016	ug/L	8.336	2	27897	5190673	1
[	Cr	53	302.704	ug/L	8.567	2	145	576126	1
[	Mn	55	300.072	ug/L	4.663	1	487	6974420	1
[	Co	59	301.836	ug/L	6.083	2	76	5158867	0
[>	Ge	72		ug/L			608948	540205	0
[	Ni	60	303.348	ug/L	7.327	2	28	1058385	1
[	Ni	62	303.759	ug/L	4 889	1	64	151627	1
[	Cu	63	300.668	ug/L	4.705	1	101	2386208	1
[	Cu	65	293.244	ug/L	3.239	1	39	1025245	1
[	Zn	66	284.133	ug/L	2.779	0	991	579850	1
[	Zn	67	287.992	ug/L	2.251	0	141	98428	0
[	Zn	68	284.902	ug/L	2.443	0	706	411878	1
[	As	75	303.660	ug/L	3.592	1	318	573209	1
[	As-1	75	305.872	ug/L	4.568	1	12623	573881	1
[	Se	82	280.727	ug/L	1.782	0	-10	62883	0
[	Se	78	286.966	ug/L	1.194	0	12864	161279	0
[	Mo	98	317.096	ug/L	3.353	1	28	1604613	0
	Y	89		ug/L			406158	364085	1
	Kr	83		ug/L			794	1142	2
[>	In	115		ug/L			1093664	1002433	0
[	Ag	107	277.144	ug/L	5.605	2	42	3865061	2
[	Cd	111	293.844	ug/L	3.131	1	115	1442191	1
[	Cd	114	303.685	ug/L	2.098	0	65	3667862	0
[	Sb	121	305.731	ug/L	3.129	1	182	4396158	0
[	Sb	123	303.069	ug/L	1.832	0	151	3307496	0
[	Ba	135	313.585	ug/L	3.202	1	15	1384530	1
[	Ba	137	319.477	ug/L	3.430	1	26	2449007	0
[>	Tb	159		ug/L			1253683	1210317	0
[	Tl	205	300.480	ug/L	3.347	1	128	10147464	0
[	Pb	208	298.242	ug/L	3.569	1	347	13151863	0
[	Bi	209		ug/L			2594753	2231606	0
[	Th	232	297.298	ug/L	2.785	0	1408	12959068	0
[	U	238	293.602	ug/L	1.050	0	31	13731411	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:16:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	867320	1
[	Be	9	0.004	ug/L	0.005	120	23	34	41
	C	13		ug/L			82469	81956	2
	Cl	37		ug/L			4833777	4844981	3
[>	Sc	45		ug/L			1144296	1090583	2
[	V	51	0.026	ug/L	0.008	31	9450	9536	3
[	V-1	51	0.015	ug/L	0.002	12	48	358	10
[	Cr	52	0.083	ug/L	0.027	32	27897	27993	2
[	Cr	53	0.047	ug/L	0.011	22	145	228	6
[	Mn	55	0.016	ug/L	0.002	14	487	837	6
[	Co	59	0.003	ug/L	0.002	74	76	117	30
[>	Ge	72		ug/L			608948	571127	2
[	Ni	60	0.043	ug/L	0.005	11	28	186	7
[	Ni	62	1.814	ug/L	0.671	37	64	1013	33
[	Cu	63	0.152	ug/L	0.043	28	101	1362	25
[	Cu	65	0.037	ug/L	0.011	28	39	174	20
[	Zn	66	0.311	ug/L	0.031	10	991	1599	2
[	Zn	67	0.325	ug/L	0.045	13	141	250	4
[	Zn	68	0.330	ug/L	0.038	11	706	1165	3
[	As	75	0.003	ug/L	0.014	486	318	304	8
[	As-1	75	0.189	ug/L	0.166	87	12623	12202	0
[	Se	82	0.017	ug/L	0.112	662	-10	-5	483
[	Se	78	0.682	ug/L	0.575	84	12864	12437	0
[	Mo	98	0.045	ug/L	0.001	2	28	267	4
	Y	89		ug/L			406158	372021	1
	Kr	83		ug/L			794	751	8
[>	In	115		ug/L			1093664	1084321	1
[	Ag	107	0.010	ug/L	0.006	59	42	194	47
[	Cd	111	0.013	ug/L	0.019	143	115	184	54
[	Cd	114	0.013	ug/L	0.017	124	65	239	90
[	Sb	121	0.299	ug/L	0.028	9	182	4826	8
[	Sb	123	0.291	ug/L	0.030	10	151	3587	9
[	Ba	135	0.016	ug/L	0.010	60	15	92	50
[	Ba	137	0.014	ug/L	0.007	51	26	144	42
[>	Tb	159		ug/L			1253683	1198272	0
[	Tl	205	0.043	ug/L	0.020	46	128	1553	43
[	Pb	208	0.014	ug/L	0.005	34	347	958	22
[	Bi	209		ug/L			2594753	2501366	0
[	Th	232	0.201	ug/L	0.008	3	1408	10038	2
[	U	238	0.010	ug/L	0.005	47	31	471	44

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:22:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	860616	0
	Be	9	-0.001	ug/L	0.001	105	23	19	12
	C	13		ug/L			82469	83110	1
	Cl	37		ug/L			4833777	4711241	1
>	Sc	45		ug/L			1144296	1084304	0
	V	51	0.029	ug/L	0.019	66	9450	9535	3
	V-1	51	0.010	ug/L	0.001	13	48	242	10
	Cr	52	0.103	ug/L	0.065	62	27897	28167	3
	Cr	53	0.038	ug/L	0.004	10	145	211	4
	Mn	55	0.009	ug/L	0.001	6	487	668	1
	Co	59	0.001	ug/L	0.001	132	76	85	20
>	Ge	72		ug/L			608948	570146	2
	Ni	60	0.042	ug/L	0.002	4	28	183	2
	Ni	62	0.261	ug/L	0.102	39	64	196	25
	Cu	63	0.027	ug/L	0.004	13	101	322	7
	Cu	65	0.016	ug/L	0.002	15	39	95	7
	Zn	66	0.012	ug/L	0.006	46	991	954	2
	Zn	67	0.066	ug/L	0.016	25	141	156	5
	Zn	68	0.037	ug/L	0 036	98	706	717	7
	As	75	-0.005	ug/L	0.020	366	318	287	13
	As-1	75	0.178	ug/L	0.188	105	12623	12159	0
	Se	82	-0.034	ug/L	0.049	143	-10	-17	64
	Se	78	0.631	ug/L	0.669	106	12864	12387	0
	Mo	98	0.012	ug/L	0.002	16	28	93	12
	Y	89		ug/L			406158	371164	1
	Kr	83		ug/L			794	759	1
>	In	115		ug/L			1093664	1052022	0
	Ag	107	0.002	ug/L	0.001	48	42	64	17
	Cd	111	0.000	ug/L	0.000	99	115	112	0
	Cd	114	0.001	ug/L	0.000	15	65	73	1
	Sb	121	0.079	ug/L	0.009	10	182	1368	9
	Sb	123	0.079	ug/L	0.011	13	151	1051	11
	Ba	135	0.006	ug/L	0.001	9	15	43	6
	Ba	137	0.007	ug/L	0.001	21	26	80	14
>	Tb	159		ug/L			1253683	1189207	0
	Tl	205	0.019	ug/L	0.010	53	128	756	44
	Pb	208	0.005	ug/L	0.001	11	347	536	3
	Bi	209		ug/L			2594753	2517677	0
	Th	232	0.049	ug/L	0.003	6	1408	3436	4
	U	238	0.002	ug/L	0.000	7	31	103	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:28:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			923208	890802	1
	Be	**9**	**-0.001**	ug/L	0.002	199	23	20	23
	C	**13**		ug/L			82469	82217	1
	Cl	**37**		ug/L			4833777	4754829	3
>	**Sc**	**45**		ug/L			1144296	1081393	2
	V	**51**	**0.024**	ug/L	0.011	45	9450	9416	2
	V-1	**51**	**0.009**	ug/L	0.000	4	48	224	2
	Cr	**52**	**0.092**	ug/L	0.047	50	27897	27898	2
	Cr	**53**	**0.040**	ug/L	0.013	32	145	213	9
	Mn	**55**	**0.016**	ug/L	0.001	4	487	825	0
	Co	**59**	**0.001**	ug/L	0.001	50	76	90	11
>	**Ge**	**72**		ug/L			608948	581858	0
	Ni	**60**	**0.054**	ug/L	0.005	9	28	231	7
	Ni	**62**	**0.091**	ug/L	0.014	15	64	110	6
	Cu	**63**	**0.185**	ug/L	0.006	3	101	1680	2
	Cu	**65**	**0.186**	ug/L	0.006	3	39	736	3
	Zn	**66**	**0.591**	ug/L	0.032	5	991	2244	2
	Zn	**67**	**0.577**	ug/L	0.049	8	141	347	4
	Zn	**68**	**0.572**	ug/L	0.044	7	706	1563	3
	As	**75**	**0.005**	ug/L	0.011	202	318	314	6
	As-1	**75**	**0.013**	ug/L	0.028	214	12623	12087	0
	Se	**82**	**-0.005**	ug/L	0.024	465	-10	-11	54
	Se	**78**	**0.013**	ug/L	0.086	642	12864	12299	0
	Mo	**98**	**0.005**	ug/L	0.001	25	28	55	13
	Y	**89**		ug/L			406158	370589	0
	Kr	**83**		ug/L			794	753	5
>	**In**	**115**		ug/L			1093664	1078900	1
	Ag	**107**	**0.001**	ug/L	0.000	10	42	51	1
	Cd	**111**	**0.001**	ug/L	0.003	357	115	118	12
	Cd	**114**	**0.000**	ug/L	0.001	293	65	68	15
	Sb	**121**	**0.036**	ug/L	0.005	14	182	744	12
	Sb	**123**	**0.036**	ug/L	0.006	17	151	569	14
	Ba	**135**	**0.029**	ug/L	0.006	19	15	151	16
	Ba	**137**	**0.027**	ug/L	0.001	2	26	251	3
>	**Tb**	**159**		ug/L			1253683	1210363	0
	Tl	**205**	**0.011**	ug/L	0.006	59	128	483	43
	Pb	**208**	**0.016**	ug/L	0.001	5	347	1028	4
	Bi	**209**		ug/L			2594753	2516683	1
	Th	**232**	**0.022**	ug/L	0.003	12	1408	2339	5
	U	**238**	**0.001**	ug/L	0.000	19	31	60	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:32:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	898775	1
[	Be	9	48.711	ug/L	0.735	1	23	155063	1
	C	13		ug/L			82469	81126	0
	Cl	37		ug/L			4833777	4773762	1
[>	Sc	45		ug/L			1144296	1126311	1
[	V	51	49.927	ug/L	0.880	1	9450	1051876	1
[	V-1	51	49.756	ug/L	0.850	1	48	1041398	1
[	Cr	52	50.582	ug/L	1.288	2	27897	909515	1
[	Cr	53	50.001	ug/L	1 104	2	145	99424	1
[	Mn	55	49.238	ug/L	0.656	1	487	1194421	0
[	Co	59	49.700	ug/L	0.909	1	76	886453	1
[>	Ge	72		ug/L			608948	591497	1
[	Ni	60	49.289	ug/L	0.726	1	28	188301	0
[	Ni	62	48.487	ug/L	0.370	0	64	26552	1
[	Cu	63	49.319	ug/L	1.538	3	101	428551	2
[	Cu	65	50.463	ug/L	1.959	3	39	193117	1
[	Zn	66	50.227	ug/L	0.884	1	991	113004	1
[	Zn	67	50.151	ug/L	0.429	0	141	18879	1
[	Zn	68	49.879	ug/L	1.887	3	706	79481	1
[	As	75	49.251	ug/L	0.708	1	318	102036	0
[	As-1	75	49.555	ug/L	1.008	2	12623	112054	0
[	Se	82	48.469	ug/L	1.210	2	-10	11876	1
[	Se	78	49.426	ug/L	2.128	4	12864	40745	1
[	Mo	98	47.914	ug/L	1.389	2	28	265454	2
	Y	89		ug/L			406158	383466	0
	Kr	83		ug/L			794	756	1
[>	In	115		ug/L			1093664	1074282	0
[	Ag	107	47.737	ug/L	1.004	2	42	713420	1
[	Cd	111	50.609	ug/L	0.308	0	115	266279	0
[	Cd	114	51.299	ug/L	0.579	1	65	664016	0
[	Sb	121	50.005	ug/L	0.260	0	182	770721	0
[	Sb	123	49.875	ug/L	0.321	0	151	583436	0
[	Ba	135	50.753	ug/L	0.267	0	15	240151	0
[	Ba	137	50.456	ug/L	0.935	1	26	414508	1
[>	Tb	159		ug/L			1253683	1248627	1
[	Tl	205	49.491	ug/L	0.080	0	128	1724501	1
[	Pb	208	49.219	ug/L	0.258	0	347	2239550	0
[	Bi	209		ug/L			2594753	2487148	1
[	Th	232	51.137	ug/L	0.579	1	1408	2300655	0
[	U	238	51.012	ug/L	0.538	1	31	2461299	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:39:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	878296	2
	Be	9	-0.002	ug/L	0.001	87	23	17	21
	C	13		ug/L			82469	82915	0
	Cl	37		ug/L			4833777	4656435	5
>	Sc	45		ug/L			1144296	1081466	1
	V	51	0.022	ug/L	0.011	52	9450	9366	1
	V-1	51	0.005	ug/L	0.001	20	48	137	12
	Cr	52	0.070	ug/L	0.032	44	27897	27540	0
	Cr	53	0.012	ug/L	0.005	42	145	160	6
	Mn	55	0.000	ug/L	0.001	574	487	465	4
	Co	59	0.001	ug/L	0.000	84	76	80	8
>	Ge	72		ug/L			608948	577264	0
	Ni	60	-0.000	ug/L	0.000	70	28	26	3
	Ni	62	0.022	ug/L	0.010	43	64	72	7
	Cu	63	0.006	ug/L	0.003	46	101	145	16
	Cu	65	0.001	ug/L	0.000	25	39	42	3
	Zn	66	-0.218	ug/L	0.005	2	991	464	2
	Zn	67	-0.186	ug/L	0.015	7	141	66	7
	Zn	68	-0.205	ug/L	0.011	5	706	353	5
	As	75	0.002	ug/L	0.016	693	318	306	10
	As-1	75	0.081	ug/L	0.091	111	12623	12126	1
	Se	82	0.011	ug/L	0.024	215	-10	-7	81
	Se	78	0.268	ug/L	0.349	130	12864	12345	1
	Mo	98	0.009	ug/L	0.003	30	28	76	19
	Y	89		ug/L			406158	372650	1
	Kr	83		ug/L			794	738	4
>	In	115		ug/L			1093664	1064552	1
	Ag	107	0.000	ug/L	0.001	516	42	43	25
	Cd	111	0.001	ug/L	0.001	126	115	115	1
	Cd	114	-0.000	ug/L	0.001	362	65	61	15
	Sb	121	0.066	ug/L	0.009	13	182	1194	12
	Sb	123	0.064	ug/L	0.006	9	151	892	9
	Ba	135	0.001	ug/L	0.000	81	15	17	10
	Ba	137	-0.000	ug/L	0.000	400	26	25	10
>	Tb	159		ug/L			1253683	1189174	0
	Tl	205	0.009	ug/L	0.005	58	128	430	42
	Pb	208	-0.002	ug/L	0.001	39	347	237	16
	Bi	209		ug/L			2594753	2510530	1
	Th	232	0.101	ug/L	0.004	4	1408	5648	3
	U	238	0.002	ug/L	0.000	4	31	125	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 14:46:13
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	932146	0
	Be	9	0.169	ug/L	0.012	7	23	580	7
	C	13		ug/L			82469	88088	2
	Cl	37		ug/L			4833777	4680350	0
>	Sc	45		ug/L			1144296	1166115	0
	V	51	5.661	ug/L	0.064	1	9450	132035	0
	V-1	51	5.687	ug/L	0.076	1	48	123291	1
	Cr	52	6.611	ug/L	0.246	3	27897	147784	2
	Cr	53	6.692	ug/L	0.230	3	145	13903	2
	Mn	55	247.985	ug/L	5.657	2	487	6226192	1
	Co	59	1.854	ug/L	0.023	1	76	34318	2
>	Ge	72		ug/L			608948	600091	1
	Ni	60	6.640	ug/L	0.227	3	28	25755	1
	Ni	62	6.777	ug/L	0.136	2	64	3820	3
	Cu	63	3.696	ug/L	0.101	2	101	32669	1
	Cu	65	3.781	ug/L	0.087	2	39	14717	0
	Zn	66	45.079	ug/L	1.089	2	991	103000	2
	Zn	67	46.226	ug/L	0.606	1	141	17669	2
	Zn	68	46.348	ug/L	1.519	3	706	74982	1
	As	75	3.275	ug/L	0.018	0	318	7177	2
	As-1	75	3.170	ug/L	0.109	3	12623	18915	0
	Se	82	0.058	ug/L	0.019	33	-10	4	110
	Se	78	-0.576	ug/L	0.419	72	12864	12340	0
	Mo	98	0.109	ug/L	0.006	5	28	639	7
	Y	89		ug/L			406158	428363	2
	Kr	83		ug/L			794	799	2
>	In	115		ug/L			1093664	1102223	1
	Ag	107	0.037	ug/L	0.001	1	42	609	2
	Cd	111	0.476	ug/L	0 015	3	115	2683	1
	Cd	114	0.435	ug/L	0.011	2	65	5845	0
	Sb	121	0.038	ug/L	0.005	12	182	789	10
	Sb	123	0.035	ug/L	0.004	10	151	578	7
	Ba	135	81.781	ug/L	0.873	1	15	397012	1
	Ba	137	81.684	ug/L	0.575	0	26	688493	1
>	Tb	159		ug/L			1253683	1259706	0
	Tl	205	0.042	ug/L	0.004	9	128	1622	8
	Pb	208	12.480	ug/L	0.096	0	347	573148	0
	Bi	209		ug/L			2594753	2586304	0
	Th	232	1.168	ug/L	0.021	1	1408	54391	0
	U	238	0.139	ug/L	0.003	2	31	6777	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:50:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			923208	949944	1
[	Be	9	0.847	ug/L	0.005	0	23	2873	0
	C	13		ug/L			82469	112257	2
	Cl	37		ug/L			4833777	4693091	0
[>	Sc	45		ug/L			1144296	1289214	0
[	V	51	26.295	ug/L	0.297	1	9450	639227	1
[	V-1	51	26.319	ug/L	0.253	0	48	630611	1
[	Cr	52	30.679	ug/L	0.761	2	27897	643846	1
[	Cr	53	30.724	ug/L	0.277	0	145	69999	0
[	Mn	55	1114.230	ug/L	12.560	1	487	30930615	1
[	Co	59	8.483	ug/L	0 050	0	76	173274	0
[>	Ge	72		ug/L			608948	600942	0
[	Ni	60	33.030	ug/L	0.495	1	28	128226	0
[	Ni	62	34.091	ug/L	0.319	0	64	18986	1
[	Cu	63	18.104	ug/L	0.370	2	101	159904	1
[	Cu	65	18.753	ug/L	0 277	1	39	72968	0
[	Zn	66	216.399	ug/L	4.930	2	991	491426	1
[	Zn	67	225.621	ug/L	3.459	1	141	85804	0
[	Zn	68	231.885	ug/L	2.474	1	706	373045	1
[	As	75	16.375	ug/L	0.213	1	318	34682	1
[	As-1	75	16.593	ug/L	0.283	1	12623	46411	0
[	Se	82	-0.286	ug/L	0.041	14	-10	-81	11
[	Se	78	-0.225	ug/L	0.252	111	12864	12563	0
[	Mo	98	0.555	ug/L	0.013	2	28	3155	3
	Y	89		ug/L			406158	570465	1
	Kr	83		ug/L			794	1366	1
[>	In	115		ug/L			1093664	1083557	0
[	Ag	107	0.202	ug/L	0.010	4	42	3087	3
[	Cd	111	2.358	ug/L	0.058	2	115	12619	1
[	Cd	114	2.163	ug/L	0.062	2	65	28296	2
[	Sb	121	0.085	ug/L	0.005	5	182	1495	4
[	Sb	123	0.084	ug/L	0.004	4	151	1137	3
[	Ba	135	439.440	ug/L	6.888	1	15	2097098	1
[	Ba	137	424.118	ug/L	9.925	2	26	3513874	1
[>	Tb	159		ug/L			1253683	1274577	0
[	Tl	205	0.192	ug/L	0.005	2	128	6974	2
[	Pb	208	62.042	ug/L	0.683	1	347	2881719	1
[	Bi	209		ug/L			2594753	2483825	0
[	Th	232	5.618	ug/L	0.051	0	1408	259326	1
[	U	238	0.693	ug/L	0.002	0	31	34145	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			923208	936726	0
	Be	9	0.820	ug/L	0.028	3	23	2745	2
	C	13		ug/L			82469	112751	3
	Cl	37		ug/L			4833777	4763014	5
>	Sc	45		ug/L			1144296	1291942	0
	V	51	29.393	ug/L	0.036	0	9450	714763	0
	V-1	51	29.377	ug/L	0.246	0	48	705358	1
	Cr	52	29.489	ug/L	0.923	3	27897	621450	3
	Cr	53	29.437	ug/L	0.136	0	145	67216	0
	Mn	55	1013.202	ug/L	17.797	1	487	28183015	1
	Co	59	8.429	ug/L	0.099	1	76	172533	1
>	Ge	72		ug/L			608948	594117	1
	Ni	60	33.179	ug/L	0.263	0	28	127344	0
	Ni	62	34.160	ug/L	0.819	2	64	18806	1
	Cu	63	17.631	ug/L	0.338	1	101	153953	0
	Cu	65	17.887	ug/L	0.363	2	39	68811	2
	Zn	66	207.696	ug/L	6.548	3	991	466324	2
	Zn	67	210.793	ug/L	2.215	1	141	79265	1
	Zn	68	220.813	ug/L	3.977	1	706	351169	0
	As	75	15.188	ug/L	0.151	0	318	31824	0
	As-1	75	15.430	ug/L	0.260	1	12623	43529	0
	Se	82	-0.218	ug/L	0.064	29	-10	-63	24
	Se	78	-0.011	ug/L	0.368	3350	12864	12543	0
	Mo	98	0.596	ug/L	0.009	1	28	3344	1
	Y	89		ug/L			406158	574518	1
	Kr	83		ug/L			794	1314	1
>	In	115		ug/L			1093664	1085695	0
	Ag	107	~ 0.184	ug/L	0.007	3	42	2813	4
	Cd	111	2.069	ug/L	0.059	2	115	11112	2
	Cd	114	1.900	ug/L	0.036	1	65	24912	1
	Sb	121	0.079	ug/L	0.003	3	182	1405	3
	Sb	123	0.078	ug/L	0.003	3	151	1068	2
	Ba	135	385.617	ug/L	1.977	0	15	1843977	0
	Ba	137	397.305	ug/L	2.129	0	26	3298672	0
>	Tb	159		ug/L			1253683	1290343	1
	Tl	205	0.181	ug/L	0.005	2	128	6639	2
	Pb	208	53.888	ug/L	1.008	1	347	2533623	0
	Bi	209		ug/L			2594753	2489806	0
	Th	232	5.561	ug/L	0.034	0	1408	259841	0
	U	238	0.651	ug/L	0.007	1	31	32488	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

AJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
[>	Li	6		ug/L			923208	940430	1
[	Be	9	25.099	ug/L	0.441	1	23	83598	0
	C	13		ug/L			82469	100124	2
	Cl	37		ug/L			4833777	4835756	1
[>	Sc	45		ug/L			1144296	1245810	1
[	V	51	56.566	ug/L	0.794	1	9450	1316836	1
[	V-1	51	56.497	ug/L	0.392	0	48	1307972	0
[	Cr	52	58.595	ug/L	0.892	1	27897	1160694	1
[	Cr	53	58.347	ug/L	0.533	0	145	128324	1
[	Mn	55	1102.214	ug/L	22.034	1	487	29570175	3
[	Co	59	35.062	ug/L	0.914	2	76	691643	1
[>	Ge	72		ug/L			608948	598771	0
[	Ni	60	58.081	ug/L	0.739	1	28	224654	1
[	Ni	62	60.835	ug/L	0.777	1	64	33709	0
[	Cu	63	43.389	ug/L	0.265	0	101	381761	1
[	Cu	65	44.181	ug/L	0.561	1	39	171253	1
[	Zn	66	277.397	ug/L	5.404	1	991	627454	1
[	Zn	67	279.510	ug/L	7.051	2	141	105883	2
[	Zn	68	295.753	ug/L	6.567	2	706	473849	1
[	As	75	41.908	ug/L	0.621	1	318	87953	1
[	As-1	75	41.448	ug/L	0.220	0	12623	96925	0
[	Se	82	75.028	ug/L	1.605	2	-10	18619	1
[	Se	78	77.108	ug/L	0.376	0	12864	57284	0
[	Mo	98	22.723	ug/L	0.161	0	28	127482	0
	Y	89		ug/L			406158	569354	0
	Kr	83		ug/L			794	1331	3
[>	In	115		ug/L			1093664	1061447	0
[	Ag	107	22.960	ug/L	0.171	0	42	339068	0
[	Cd	111	27.027	ug/L	0.514	1	115	140562	2
[	Cd	114	27.445	ug/L	0.189	0	65	351045	0
[	Sb	121	1.777	ug/L	0.007	0	182	27231	0
[	Sb	123	1.781	ug/L	0.019	1	151	20723	1
[	Ba	135	436.734	ug/L	10.993	2	15	2041662	2
[	Ba	137	428.843	ug/L	5.536	1	26	3480826	0
[>	Tb	159		ug/L			1253683	1271378	0
[	Tl	205	25.314	ug/L	0.217	0	128	898137	0
[	Pb	208	83.547	ug/L	0.329	0	347	3870571	0
[	Bi	209		ug/L			2594753	2452287	0
[	Th	232	31.079	ug/L	0.063	0	1408	1424394	0
[	U	238	25.903	ug/L	0.534	2	31	1272478	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:02:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			923208	938935	0
[	Be	9	0.474	ug/L	0.015	3	23	1599	3
	C	13		ug/L			82469	118557	0
	Cl	37		ug/L			4833777	4674870	1
[>	Sc	45		ug/L			1144296	1267782	0
[	V	51	26.792	ug/L	0.344	1	9450	640253	1
[	V-1	51	26.847	ug/L	0.197	0	48	632546	0
[	Cr	52	16.461	ug/L	0.171	1	27897	354070	0
[	Cr	53	16.724	ug/L	0.371	2	145	37545	2
[	Mn	55	1346.126	ug/L	7.024	0	487	36745445	0
[	Co	59	6.786	ug/L	0.008	0	76	136323	0
[>	Ge	72		ug/L			608948	602744	0
[	Ni	60	13.783	ug/L	0.342	2	28	53685	2
[	Ni	62	15.208	ug/L	0 107	0	64	8530	0
[	Cu	63	16.647	ug/L	0.290	1	101	147499	1
[	Cu	65	17.114	ug/L	0.157	0	39	66798	1
[	Zn	66	269.258	ug/L	0.444	0	991	613148	0
[	Zn	67	268.300	ug/L	4.924	1	141	102320	1
[	Zn	68	277.910	ug/L	6.717	2	706	448273	2
[	As	75	17.694	ug/L	0.195	1	318	37563	0
[	As-1	75	17.966	ug/L	0.244	1	12623	49371	0
[	Se	82	-0.035	ug/L	0.026	76	-10	-18	35
[	Se	78	-0.306	ug/L	0.177	57	12864	12555	0
[	Mo	98	0.460	ug/L	0.019	4	28	2626	4
	Y	89		ug/L			406158	518076	1
	Kr	83		ug/L			794	1057	2
[>	In	115		ug/L			1093664	1109524	0
[	Ag	107	~~0~~0.126	ug/L	0.003	2	42	1985	2
[	Cd	111	5.340	ug/L	0.042	0	115	29120	0
[	Cd	114	5.290	ug/L	0.026	0	65	70776	0
[	Sb	121	0.447	ug/L	0.009	1	182	7292	1
[	Sb	123	0.448	ug/L	0.011	2	151	5563	2
[	Ba	135	345.600	ug/L	5.452	1	15	1688867	1
[	Ba	137	350.175	ug/L	3.576	1	26	2971216	1
[>	Tb	159		ug/L			1253683	1265353	0
[	Tl	205	0.327	ug/L	0.003	0	128	11686	0
[	Pb	208	248.515	ug/L	2.761	1	347	11457773	0
[	Bi	209		ug/L			2594753	2501343	0
[	Th	232	5.420	ug/L	0.044	0	1408	248418	1
[	U	238	0.510	ug/L	0.002	0	31	24965	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:06:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	926834	1
	Be	9	0.664	ug/L	0.028	4	23	2202	2
	C	13		ug/L			82469	114342	1
	Cl	37		ug/L			4833777	4705789	1
>	Sc	45		ug/L			1144296	1243574	2
	V	51	23.636	ug/L	0.724	3	9450	555023	1
	V-1	51	23.592	ug/L	0.807	3	48	544978	1
	Cr	52	20.893	ug/L	0.489	2	27897	432500	0
	Cr	53	20.766	ug/L	0 794	3	145	45660	1
	Mn	55	725.488	ug/L	28.932	3	487	19412395	1
	Co	59	6.319	ug/L	0.185	2	76	124463	0
>	Ge	72		ug/L			608948	591666	1
	Ni	60	20.420	ug/L	0.353	1	28	78060	1
	Ni	62	21.109	ug/L	0.481	2	64	11597	1
	Cu	63	17.874	ug/L	0.394	2	101	155430	1
	Cu	65	18.485	ug/L	0.301	1	39	70828	2
	Zn	66	86.491	ug/L	2.168	2	991	193949	1
	Zn	67	101.213	ug/L	1.547	1	141	37972	0
	Zn	68	97.904	ug/L	1.734	1	706	155447	0
	As	75	6.592	ug/L	0.147	2	318	13929	1
	As-1	75	6.655	ug/L	0.228	3	12623	25669	0
	Se	82	-0.235	ug/L	0.081	34	-10	-67	30
	Se	78	0.040	ug/L	0.321	809	12864	12521	0
	Mo	98	0.372	ug/L	0 007	1	28	2088	1
	Y	89		ug/L			406158	585475	2
	Kr	83		ug/L			794	1255	3
>	In	115		ug/L			1093664	1080919	0
	Ag	107	~0.140	ug/L	0.001	0	42	2152	0
	Cd	111	0.727	ug/L	0.032	4	115	3959	4
	Cd	114	0.575	ug/L	0.006	0	65	7555	1
	Sb	121	0.052	ug/L	0.001	2	182	988	1
	Sb	123	0.050	ug/L	0.004	7	151	742	5
	Ba	135	315.156	ug/L	4.037	1	15	1500393	1
	Ba	137	318.971	ug/L	2.159	0	26	2636638	0
>	Tb	159		ug/L			1253683	1262444	0
	Tl	205	0.133	ug/L	0.002	1	128	4830	1
	Pb	208	31.354	ug/L	0.282	0	347	1442534	0
	Bi	209		ug/L			2594753	2482401	0
	Th	232	5.313	ug/L	0.027	0	1408	242985	0
	U	238	1.098	ug/L	0.020	1	31	53591	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:10:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			923208	925173	0
[	Be	9	0.431	ug/L	0.006	1	23	1437	1
	C	13		ug/L			82469	112499	3
	Cl	37		ug/L			4833777	4721761	1
[>	Sc	45		ug/L			1144296	1242547	2
[	V	51	17.436	ug/L	0.439	2	9450	411863	1
[	V-1	51	17.505	ug/L	0.268	1	48	404189	0
[	Cr	52	11.874	ug/L	0.455	3	27897	258680	2
[	Cr	53	12.151	ug/L	0.365	3	145	26776	3
[	Mn	55	1082.556	ug/L	31.652	2	487	28951335	1
[	Co	59	4.546	ug/L	0.094	2	76	89528	2
[>	Ge	72		ug/L			608948	596517	0
[	Ni	60	13.692	ug/L	0.162	1	28	52780	0
[	Ni	62	14.879	ug/L	0.660	4	64	8259	3
[	Cu	63	10.423	ug/L	0.146	1	101	91440	1
[	Cu	65	10.819	ug/L	0.208	1	39	41802	1
[	Zn	66	153.356	ug/L	3.439	2	991	345984	1
[	Zn	67	165.252	ug/L	6.110	3	141	62420	3
[	Zn	68	167.157	ug/L	1.880	1	706	267115	0
[	As	75	6.125	ug/L	0.071	1	318	13071	0
[	As-1	75	6.248	ug/L	0.134	2	12623	25056	0
[	Se	82	-0.113	ug/L	0.119	104	-10	-37	77
[	Se	78	0.122	ug/L	0.241	197	12864	12671	0
[	Mo	98	0.339	ug/L	0.006	1	28	1923	1
	Y	89		ug/L			406158	494942	1
	Kr	83		ug/L			794	1041	7
[>	In	115		ug/L			1093664	1085703	0
[	Ag	107	0.139	ug/L	0.005	3	42	2146	3
[	Cd	111	1.533	ug/L	0.036	2	115	8261	2
[	Cd	114	1.378	ug/L	0.006	0	65	18095	0
[	Sb	121	0.066	ug/L	0.003	4	182	1207	4
[	Sb	123	0.064	ug/L	0.002	2	151	905	1
[	Ba	135	438.261	ug/L	2.473	0	15	2095721	0
[	Ba	137	430.365	ug/L	4.083	0	26	3573158	0
[>	Tb	159		ug/L			1253683	1269680	1
[	Tl	205	0.141	ug/L	0.004	2	128	5114	1
[	Pb	208	65.133	ug/L	0 646	0	347	3013364	0
[	Bi	209		ug/L			2594753	2508843	0
[	Th	232	3.504	ug/L	0.026	0	1408	161657	0
[	U	238	0.424	ug/L	0.001	0	31	20836	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:15:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	940258	2
	Be	9	0.877	ug/L	0.028	3	23	2943	0
	C	13		ug/L			82469	116382	1
	Cl	37		ug/L			4833777	4938150	4
>	Sc	45		ug/L			1144296	1296583	1
	V	51	35.394	ug/L	0.673	1	9450	861408	0
	V-1	51	35.355	ug/L	0.759	2	48	851697	0
	Cr	52	62.467	ug/L	1 077	1	27897	1285545	0
	Cr	53	62.130	ug/L	1.357	2	145	142161	0
	Mn	55	1325.853	ug/L	28.346	2	487	37004486	0
	Co	59	10.899	ug/L	0.288	2	76	223781	0
>	Ge	72		ug/L			608948	581140	3
	Ni	60	61.321	ug/L	1.737	2	28	230091	1
	Ni	62	63.460	ug/L	1 996	3	64	34104	0
	Cu	63	22.902	ug/L	1.043	4	101	195449	2
	Cu	65	23.943	ug/L	1.240	5	39	89998	2
	Zn	66	293.780	ug/L	9.593	3	991	644539	1
	Zn	67	292.864	ug/L	8.309	2	141	107616	0
	Zn	68	309.890	ug/L	10.088	3	706	481562	0
	As	75	15.837	ug/L	0.563	3	318	32424	0
	As-1	75	16.226	ug/L	0.753	4	12623	44127	0
	Se	82	-0.301	ug/L	0.105	34	-10	-81	27
	Se	78	0.298	ug/L	0.591	198	12864	12438	0
	Mo	98	0.513	ug/L	0.032	6	28	2818	2
	Y	89		ug/L			406158	528535	2
	Kr	83		ug/L			794	1243	2
>	In	115		ug/L			1093664	1079913	0
	Ag	107	~0.176	ug/L	0.002	1	42	2691	1
	Cd	111	4.053	ug/L	0.040	0	115	21542	0
	Cd	114	4.022	ug/L	0.036	0	65	52401	0
	Sb	121	0.063	ug/L	0.004	5	182	1162	5
	Sb	123	0.058	ug/L	0.001	1	151	829	1
	Ba	135	475.933	ug/L	3.456	0	15	2263756	0
	Ba	137	469.695	ug/L	5.938	1	26	3878799	0
>	Tb	159		ug/L			1253683	1279194	1
	Tl	205	0.237	ug/L	0.005	2	128	8587	1
	Pb	208	182.371	ug/L	4.042	2	347	8499311	1
	Bi	209		ug/L			2594753	2461397	0
	Th	232	5.528	ug/L	0.059	1	1408	256097	0
	U	238	0.540	ug/L	0.008	1	31	26701	1

ICP-MS Quantitative Analysis - Summary Report

Ag

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:20:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	930980	1
[	Be	9	0.443	ug/L	0.024	5	23	1483	5
	C	13		ug/L			82469	117135	1
	Cl	37		ug/L			4833777	4780410	2
[>	Sc	45		ug/L			1144296	1248512	1
[	V	51	18.670	ug/L	0.126	0	9450	442492	0
[	V-1	51	18.684	ug/L	0.181	0	48	433511	0
[	Cr	52	12.557	ug/L	0.243	1	27897	273169	1
[	Cr	53	12.649	ug/L	0.370	2	145	27995	1
[	Mn	55	1050.565	ug/L	10 199	0	487	28241147	1
[	Co	59	4.867	ug/L	0.042	0	76	96303	0
[>	Ge	72		ug/L			608948	595551	2
[	Ni	60	11.881	ug/L	0.546	4	28	45696	2
[	Ni	62	12.485	ug/L	0.488	3	64	6929	4
[	Cu	63	10.629	ug/L	0.424	3	101	93028	1
[	Cu	65	10.890	ug/L	0.415	3	39	41985	1
[	Zn	66	133.508	ug/L	4.338	3	991	300716	1
[	Zn	67	140.029	ug/L	2.809	2	141	52814	0
[	Zn	68	144.108	ug/L	6.284	4	706	229842	1
[	As	75	12.988	ug/L	0.349	2	318	27315	0
[	As-1	75	13.267	ug/L	0.510	3	12623	39233	0
[	Se	82	-0.040	ug/L	0.069	174	-10	-19	88
[	Se	78	0.113	ug/L	0.634	561	12864	12640	0
[	Mo	98	0.468	ug/L	0.011	2	28	2636	1
	Y	89		ug/L			406158	506595	0
	Kr	83		ug/L			794	1030	4
[>	In	115		ug/L			1093664	1072882	0
[	Ag	107	~0.093	ug/L	0.003	2	42	1436	2
[	Cd	111	1.722	ug/L	0.070	4	115	9157	3
[	Cd	114	1.649	ug/L	0.022	1	65	21375	0
[	Sb	121	0.114	ug/L	0.005	4	182	1935	3
[	Sb	123	0.119	ug/L	0.002	1	151	1537	0
[	Ba	135	301.872	ug/L	4.336	1	15	1426455	1
[	Ba	137	308.555	ug/L	6.128	1	26	2531541	1
[>	Tb	159		ug/L			1253683	1265882	0
[	Tl	205	0.151	ug/L	0.007	4	128	5449	4
[	Pb	208	75.513	ug/L	1.515	2	347	3482972	1
[	Bi	209		ug/L			2594753	2515010	0
[	Th	232	4.757	ug/L	0.116	2	1408	218253	1
[	U	238	0.599	ug/L	0.009	1	31	29308	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:24:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	914773	1
[	Be	9	0.516	ug/L	0.005	0	23	1695	0
	C	13		ug/L			82469	110315	1
	Cl	37		ug/L			4833777	4707910	2
[>	Sc	45		ug/L			1144296	1251794	0
[	V	51	22.392	ug/L	0.757	3	9450	530011	2
[	V-1	51	22.470	ug/L	0.793	3	48	522696	3
[	Cr	52	15.738	ug/L	0.469	2	27897	335593	2
[	Cr	53	16.050	ug/L	0.181	1	145	35582	0
[	Mn	55	700.698	ug/L	16.476	2	487	18884998	2
[	Co	59	5.178	ug/L	0.100	1	76	102735	2
[>	Ge	72		ug/L			608948	596075	2
[	Ni	60	13.771	ug/L	0.530	3	28	53020	2
[	Ni	62	15.404	ug/L	0.357	2	64	8541	1
[	Cu	63	11.081	ug/L	0.325	2	101	97084	1
[	Cu	65	11.424	ug/L	0.335	2	39	44088	0
[	Zn	66	88.046	ug/L	3.648	4	991	198815	2
[	Zn	67	96.905	ug/L	2.905	2	141	36622	1
[	Zn	68	93.938	ug/L	3.139	3	706	150230	1
[	As	75	7.323	ug/L	0.226	3	318	15549	1
[	As-1	75	7.433	ug/L	0.347	4	12623	27434	0
[	Se	82	-0.101	ug/L	0.063	62	-10	-35	46
[	Se	78	0.056	ug/L	0.478	860	12864	12620	0
[	Mo	98	0.399	ug/L	0.023	5	28	2255	3
	Y	89		ug/L			406158	553312	2
	Kr	83		ug/L			794	1095	4
[>	In	115		ug/L			1093664	1079361	0
[	Ag	107	~0.087	ug/L	0.007	8	42	1342	8
[	Cd	111	0.741	ug/L	0.013	1	115	4031	1
[	Cd	114	0.609	ug/L	0.005	0	65	7985	0
[	Sb	121	0.053	ug/L	0.003	5	182	996	4
[	Sb	123	0.050	ug/L	0.002	3	151	740	3
[	Ba	135	215.972	ug/L	0.879	0	15	1026743	0
[	Ba	137	218.583	ug/L	3.201	1	26	1804189	1
[>	Tb	159		ug/L			1253683	1256254	1
[	Tl	205	0.137	ug/L	0.003	1	128	4933	0
[	Pb	208	52.268	ug/L	1.120	2	347	2392495	1
[	Bi	209		ug/L			2594753	2507564	0
[	Th	232	4.967	ug/L	0.108	2	1408	226061	0
[	U	238	0.756	ug/L	0.016	2	31	36744	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 15:28:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	908770 ✓	0
	Be	9	49.177	ug/L	1.201	2	23	158275	1
	C	13		ug/L			82469	85898	1
	Cl	37		ug/L			4833777	4938363	3
>	Sc	45		ug/L			1144296	1134662 ✓	0
	V	51	49.037	ug/L	0.707	1	9450	1041113	2
	V-1	51	49.215	ug/L	0.786	1	48	1037864	2
	Cr	52	49.721	ug/L	0.255	0	27897	901276	0
	Cr	53	50.316	ug/L	0.250	0	145	100805	0
	Mn	55	48.686	ug/L	0.161	0	487	1189889	0
	Co	59	50.569	ug/L	0.676	1	76	908702	1
>	Ge	72		ug/L			608948	588907 ✓	1
	Ni	60	50.476	ug/L	0.238	0	28	192033	1
	Ni	62	48.361	ug/L	1.933	3	64	26358	2
	Cu	63	49.095	ug/L	0.827	1	101	424876	2
	Cu	65	50.236	ug/L	0.427	0	39	191487	0
	Zn	66	49.577	ug/L	0.468	0	991	111074	0
	Zn	67	49.052	ug/L	0.547	1	141	18387	0
	Zn	68	50.639	ug/L	1.861	3	706	80338	2
	As	75	50.444	ug/L	0.461	0	318	104053	0
	As-1	75	50.375	ug/L	0.874	1	12623	113215	0
	Se	82	49.751	ug/L	0.720	1	-10	12142	2
	Se	78	49.498	ug/L	0.911	1	12864	40616	0
	Mo	98	48.917	ug/L	1.352	2	28	269869	2
	Y	89		ug/L			406158	389398	0
	Kr	83		ug/L			794	820	2
>	In	115		ug/L			1093664	1058729 ✓	1
	Ag	107	48.955	ug/L	0.585	1	42	721120	2
	Cd	111	50.691	ug/L	0.297	0	115	262847	0
	Cd	114	50.980	ug/L	0.127	0	65	650353	0
	Sb	121	50.830	ug/L	0.458	0	182	772058	0
	Sb	123	49.902	ug/L	0.385	0	151	575324	1
	Ba	135	50.387	ug/L	0.153	0	15	234968	0
	Ba	137	50.180	ug/L	0.434	0	26	406289	1
>	Tb	159		ug/L			1253683	1236364 ✓	1
	Tl	205	49.196	ug/L	0.123	0	128	1697326	0
	Pb	208	49.540	ug/L	0.592	1	347	2231992	1
	Bi	209		ug/L			2594753	2474648	0
	Th	232	51.496	ug/L	0.499	0	1408	2294088	0
	U	238	51.401	ug/L	0.621	1	31	2455569	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 15:35:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	876656	1
[	Be	9	-0.001	ug/L	0.002	191	23	19	32
	C	13		ug/L			82469	82075	0
	Cl	37		ug/L			4833777	4799670	1
[>	Sc	45		ug/L			1144296	1093771	3
[	V	51	0.019	ug/L	0.018	97	9450	9409	0
[	V-1	51	0.001	ug/L	0.001	52	48	70	17
[	Cr	52	0.069	ug/L	0.065	93	27897	27818	0
[	Cr	53	0.009	ug/L	0.003	34	145	157	1
[	Mn	55	0.006	ug/L	0.002	29	487	599	9
[	Co	59	0.000	ug/L	0.000	109	76	80	7
[>	Ge	72		ug/L			608948	565743	0
[	Ni	60	0.003	ug/L	0.002	71	28	38	21
[	Ni	62	0.001	ug/L	0.018	1804	64	60	15
[	Cu	63	0.008	ug/L	0.002	21	101	162	9
[	Cu	65	0.008	ug/L	0.002	24	39	65	10
[	Zn	66	-0.168	ug/L	0.009	5	991	561	3
[	Zn	67	-0.108	ug/L	0.040	36	141	93	15
[	Zn	68	-0.129	ug/L	0.008	5	706	461	1
[	As	75	0.021	ug/L	0.009	42	318	336	4
[	As-1	75	0.219	ug/L	0.025	11	12623	12148	0
[	Se	82	0.032	ug/L	0.075	231	-10	-1	913
[	Se	78	0.743	ug/L	0.064	8	12864	12358	0
[	Mo	98	0.004	ug/L	0.001	28	28	49	12
	Y	89		ug/L			406158	376293	2
	Kr	83		ug/L			794	748	3
[>	In	115		ug/L			1093664	1026642	0
[	Ag	107	-0.000	ug/L	0.000	58	42	34	10
[	Cd	111	-0.002	ug/L	0.002	83	115	96	9
[	Cd	114	-0.001	ug/L	0.000	23	65	51	4
[	Sb	121	0.045	ug/L	0.005	10	182	835	8
[	Sb	123	0.043	ug/L	0.004	8	151	628	7
[	Ba	135	0.006	ug/L	0.001	15	15	42	10
[	Ba	137	0.004	ug/L	0.001	26	26	52	14
[>	Tb	159		ug/L			1253683	1167892	0
[	Tl	205	0.008	ug/L	0.004	55	128	376	37
[	Pb	208	0.000	ug/L	0.001	571	347	330	10
[	Bi	209		ug/L			2594753	2451410	0
[	Th	232	0.057	ug/L	0.001	2	1408	3711	1
[	U	238	0.001	ug/L	0.000	5	31	86	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:41:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	899958	0
	Be	9	-0.002	ug/L	0.003	148	23	17	49
	C	13		ug/L			82469	88433	1
	Cl	37		ug/L			4833777	4711070	1
>	Sc	45		ug/L			1144296	1134692	2
	V	51	0.008	ug/L	0.008	98	9450	9543	1
	V-1	51	0.002	ug/L	0.001	33	48	96	14
	Cr	52	0.029	ug/L	0.031	107	27897	28164	0
	Cr	53	0.009	ug/L	0.008	88	145	161	7
	Mn	55	0.032	ug/L	0.014	43	487	1254	24
	Co	59	0.002	ug/L	0.001	43	76	103	10
>	Ge	72		ug/L			608948	572520	0
	Ni	60	0.004	ug/L	0.002	59	28	41	20
	Ni	62	0.004	ug/L	0.035	862	64	62	29
	Cu	63	0.031	ug/L	0.004	12	101	353	9
	Cu	65	0.027	ug/L	0.002	7	39	137	5
	Zn	66	-0.068	ug/L	0.017	24	991	785	5
	Zn	67	-0.012	ug/L	0.012	101	141	129	2
	Zn	68	-0.049	ug/L	0.020	41	706	589	4
	As	75	0.023	ug/L	0.017	73	318	344	9
	As-1	75	0.227	ug/L	0.111	48	12623	12308	1
	Se	82	0.046	ug/L	0.060	129	-10	1	1039
	Se	78	0.787	ug/L	0.427	54	12864	12529	1
	Mo	98	0.001	ug/L	0.001	78	28	31	10
	Y	89		ug/L			406158	377789	1
	Kr	83		ug/L			794	763	3
>	In	115		ug/L			1093664	1052997	0
	Ag	107	~0.000	ug/L	0.000	148	42	37	15
	Cd	111	-0.002	ug/L	0.001	63	115	102	6
	Cd	114	-0.000	ug/L	0.000	133	65	60	4
	Sb	121	0.008	ug/L	0.001	16	182	303	6
	Sb	123	0.006	ug/L	0.003	48	151	218	15
	Ba	135	0.014	ug/L	0.003	22	15	80	19
	Ba	137	0.012	ug/L	0.003	24	26	124	19
>	Tb	159		ug/L			1253683	1188271	0
	Tl	205	0.005	ug/L	0.002	46	128	285	26
	Pb	208	0.008	ug/L	0 001	12	347	660	6
	Bi	209		ug/L			2594753	2463639	0
	Th	232	0.034	ug/L	0.006	17	1408	2784	9
	U	238	0.000	ug/L	0.000	79	31	41	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:45:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	883627	0
	Be	9	24.551	ug/L	0.023	0	23	76850	0
	C	13		ug/L			82469	86990	1
	Cl	37		ug/L			4833777	4846774	2
>	Sc	45		ug/L			1144296	1125303	2
	V	51	25.100	ug/L	0.930	3	9450	532699	1
	V-1	51	25.032	ug/L	0.786	3	48	523266	0
	Cr	52	25.737	ug/L	1.397	5	27897	475519	2
	Cr	53	25.504	ug/L	0.887	3	145	50717	1
	Mn	55	25.283	ug/L	0.350	1	487	612915	1
	Co	59	25.772	ug/L	1.168	4	76	459012	2
>	Ge	72		ug/L			608948	577142	0
	Ni	60	26.155	ug/L	0.322	1	28	97532	1
	Ni	62	25.458	ug/L	0.612	2	64	13631	1
	Cu	63	26.734	ug/L	0.267	0	101	226750	0
	Cu	65	26.691	ug/L	0.536	2	39	99738	2
	Zn	66	82.471	ug/L	1.344	1	991	180485	2
	Zn	67	76.240	ug/L	1.168	1	141	27938	1
	Zn	68	80.256	ug/L	1.315	1	706	124444	2
	As	75	27.049	ug/L	0.681	2	318	54820	1
	As-1	75	25.836	ug/L	0.184	0	12623	62742	0
	Se	82	79.281	ug/L	1.815	2	-10	18964	1
	Se	78	79.766	ug/L	0.669	0	12864	56699	1
	Mo	98	24.276	ug/L	0.446	1	28	131269	1
	Y	89		ug/L			406158	384734	1
	Kr	83		ug/L			794	809	2
>	In	115		ug/L			1093664	1056027	1
	Ag	107	25.435	ug/L	0.705	2	42	373620	1
	Cd	111	24.895	ug/L	0.303	1	115	128806	0
	Cd	114	25.128	ug/L	0.333	1	65	319743	0
	Sb	121	24.896	ug/L	0.278	1	182	377261	0
	Sb	123	24.890	ug/L	0.580	2	151	286242	1
	Ba	135	25.580	ug/L	0.263	1	15	118983	1
	Ba	137	25.413	ug/L	0.148	0	26	205244	1
>	Tb	159		ug/L			1253683	1197166	0
	Tl	205	26.276	ug/L	0.081	0	128	877876	0
	Pb	208	26.250	ug/L	0.020	0	347	1145388	0
	Bi	209		ug/L			2594753	2508446	0
	Th	232	25.606	ug/L	0.297	1	1408	1105310	1
	U	238	25.683	ug/L	0.218	0	31	1188152	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:49:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			923208	916718	0
[	Be	9	0.478	ug/L	0.037	7	23	1574	6
	C	13		ug/L			82469	114617	1
	Cl	37		ug/L			4833777	4640620	3
[>	Sc	45		ug/L			1144296	1226137	3
[	V	51	20.301	ug/L	0.929	4	9450	471240	2
[	V-1	51	20.392	ug/L	0.978	4	48	464260	2
[	Cr	52	13.479	ug/L	0.345	2	27897	285671	1
[	Cr	53	13.837	ug/L	0 505	3	145	30048	2
[	Mn	55	860.529	ug/L	23.120	2	487	22706077	1
[	Co	59	4.690	ug/L	0.150	3	76	91071	0
[>	Ge	72		ug/L			608948	601099	1
[	Ni	60	12.369	ug/L	0 533	4	28	48024	2
[	Ni	62	13.328	ug/L	0.241	1	64	7461	0
[	Cu	63	9.841	ug/L	0.523	5	101	86938	3
[	Cu	65	10.035	ug/L	0.161	1	39	39072	1
[	Zn	66	60.525	ug/L	1.269	2	991	138175	1
[	Zn	67	74.757	ug/L	1.318	1	141	28531	2
[	Zn	68	70.118	ug/L	2.712	3	706	113261	1
[	As	75	4.554	ug/L	0.213	4	318	9869	2
[	As-1	75	4.513	ug/L	0.278	6	12623	21691	0
[	Se	82	-0.065	ug/L	0.087	134	-10	-26	84
[	Se	78	-0.197	ug/L	0.356	180	12864	12582	1
[	Mo	98	0.396	ug/L	0.016	4	28	2254	2
	Y	89		ug/L			406158	516961	0
	Kr	83		ug/L			794	1097	4
[>	In	115		ug/L			1093664	1077964	1
[	Ag	107	~0.095	ug/L	0.004	3	42	1469	3
[	Cd	111	0.573	ug/L	0.021	3	115	3136	4
[	Cd	114	0.415	ug/L	0.008	1	65	5451	0
[	Sb	121	0.082	ug/L	0.003	3	182	1453	1
[	Sb	123	0.085	ug/L	0.009	10	151	1152	7
[	Ba	135	241.892	ug/L	6.177	2	15	1148255	1
[	Ba	137	239.592	ug/L	4.402	1	26	1974816	0
[>	Tb	159		ug/L			1253683	1273472	0
[	Tl	205	0.106	ug/L	0.002	1	128	3910	0
[	Pb	208	21.642	ug/L	0.366	1	347	1004463	0
[	Bi	209		ug/L			2594753	2499345	1
[	Th	232	4.402	ug/L	0.064	1	1408	203291	0
[	U	238	0.736	ug/L	0.027	3	31	36263	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:53:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	920441	1
[	Be	9	0.489	ug/L	0.009	1	23	1616	0
	C	13		ug/L			82469	103475	3
	Cl	37		ug/L			4833777	4614911	3
[>	Sc	45		ug/L			1144296	1223341	1
[	V	51	21.075	ug/L	0.114	0	9450	488167	2
[	V-1	51	21.151	ug/L	0.037	0	48	480890	1
[	Cr	52	13.910	ug/L	0.134	0	27897	293308	1
[	Cr	53	14.219	ug/L	0.431	3	145	30816	1
[	Mn	55	289.740	ug/L	6.172	2	487	7630564	0
[	Co	59	4.929	ug/L	0.098	1	76	95539	0
[>	Ge	72		ug/L			608948	596701	0
[	Ni	60	12.341	ug/L	0.118	0	28	47592	0
[	Ni	62	13.457	ug/L	0.117	0	64	7480	0
[	Cu	63	11.531	ug/L	0.277	2	101	101173	2
[	Cu	65	12.039	ug/L	0.133	1	39	46529	1
[	Zn	66	42.545	ug/L	0.592	1	991	96730	1
[	Zn	67	52.668	ug/L	0.038	0	141	19996	0
[	Zn	68	47.658	ug/L	0.239	0	706	76678	0
[	As	75	3.138	ug/L	0.041	1	318	6852	1
[	As-1	75	3.101	ug/L	0.023	0	12623	18670	0
[	Se	82	-0.052	ug/L	0.073	138	-10	-22	78
[	Se	78	-0.032	ug/L	0.152	482	12864	12588	0
[	Mo	98	0.277	ug/L	0.009	3	28	1579	2
	Y	89		ug/L			406158	527808	1
	Kr	83		ug/L			794	1099	2
[>	In	115		ug/L			1093664	1054317	0
[	Ag	107	~0.125	ug/L	0.003	2	42	1872	2
[	Cd	111	0.382	ug/L	0.029	7	115	2081	7
[	Cd	114	0.200	ug/L	0.003	1	65	2609	1
[	Sb	121	0.041	ug/L	0.002	6	182	793	4
[	Sb	123	0.043	ug/L	0.003	6	151	635	4
[	Ba	135	148.150	ug/L	0.465	0	15	687974	0
[	Ba	137	147.785	ug/L	1.661	1	26	1191543	1
[>	Tb	159		ug/L			1253683	1253978	0
[	Tl	205	0.091	ug/L	0.002	2	128	3329	2
[	Pb	208	8.806	ug/L	0.125	1	347	402668	0
[	Bi	209		ug/L			2594753	2478043	1
[	Th	232	4.595	ug/L	0.044	0	1408	208893	0
[	U	238	0.864	ug/L	0.015	1	31	41901	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:57:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			923208	933541	2
Be	9	0.415	ug/L	0.006	1	23	1395	3
C	13		ug/L			82469	100862	3
Cl	37		ug/L			4833777	4764082	2
Sc	45		ug/L			1144296	1213594	2
V	51	23.279	ug/L	0.477	2	9450	533728	1
V-1	51	23.283	ug/L	0.512	2	48	525017	1
Cr	52	15.257	ug/L	0.173	1	27897	316308	2
Cr	53	15.331	ug/L	0.067	0	145	32957	1
Mn	55	276.941	ug/L	3.469	1	487	7236594	2
Co	59	5.091	ug/L	0.112	2	76	97909	3
Ge	72		ug/L			608948	592665	2
Ni	60	12.916	ug/L	0.366	2	28	49451	0
Ni	62	13.842	ug/L	0.622	4	64	7635	2
Cu	63	11.290	ug/L	0.225	1	101	98374	1
Cu	65	11.471	ug/L	0.326	2	39	44018	0
Zn	66	39.534	ug/L	0.557	1	991	89325	0
Zn	67	45.871	ug/L	1.208	2	141	17312	2
Zn	68	43.382	ug/L	0.647	1	706	69376	1
As	75	3.471	ug/L	0.014	0	318	7494	1
As-1	75	3.521	ug/L	0.134	3	12623	19388	0
Se	82	-0.083	ug/L	0.065	78	-10	-30	50
Se	78	0.205	ug/L	0.408	199	12864	12634	0
Mo	98	0.317	ug/L	0.004	1	28	1787	1
Y	89		ug/L			406158	520504	0
Kr	83		ug/L			794	1084	2
In	115		ug/L			1093664	1069948	1
Ag	107	0.094	ug/L	0.005	5	42	1438	4
Cd	111	0.288	ug/L	0.019	6	115	1621	7
Cd	114	0.127	ug/L	0.002	1	65	1695	1
Sb	121	0.018	ug/L	0.001	5	182	458	1
Sb	123	0.016	ug/L	0.002	9	151	333	6
Ba	135	105.794	ug/L	1.314	1	15	498559	1
Ba	137	104.961	ug/L	0.564	0	26	858787	0
Tb	159		ug/L			1253683	1250465	0
Tl	205	0.081	ug/L	0.001	1	128	2949	2
Pb	208	8.493	ug/L	0.112	1	347	387285	0
Bi	209		ug/L			2594753	2468522	1
Th	232	5.550	ug/L	0.078	1	1408	251331	0
U	238	0.798	ug/L	0.006	0	31	38570	1

VR32 · 88480

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:01:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			923208	927709	1
[	Be	9	0.390	ug/L	0.015	3	23	1304	4
	C	13		ug/L			82469	112987	1
	Cl	37		ug/L			4833777	4764523	3
[>	Sc	45		ug/L			1144296	1228678	0
[	V	51	18.991	ug/L	0.096	0	9450	442792	0
[	V-1	51	19.033	ug/L	0.145	0	48	434635	0
[	Cr	52	20.374	ug/L	0.122	0	27897	417589	0
[	Cr	53	20.507	ug/L	0.301	1	145	44578	1
[	Mn	55	643.559	ug/L	6.121	0	487	17025020	0
[	Co	59	5.496	ug/L	0.191	3	76	107000	3
[>	Ge	72		ug/L			608948	595704	1
[	Ni	60	14.066	ug/L	0.448	3	28	54142	2
[	Ni	62	14.767	ug/L	0.486	3	64	8185	2
[	Cu	63	14.395	ug/L	0.352	2	101	126046	1
[	Cu	65	14.712	ug/L	0.401	2	39	56745	1
[	Zn	66	142.425	ug/L	1.962	1	991	320952	0
[	Zn	67	143.797	ug/L	4.301	2	141	54253	2
[	Zn	68	151.811	ug/L	5.794	3	706	242250	2
[	As	75	8.182	ug/L	0.178	2	318	17331	0
[	As-1	75	8.241	ug/L	0.227	2	12623	29062	0
[	Se	82	0.010	ug/L	0.046	478	-10	-7	151
[	Se	78	-0.154	ug/L	0.187	121	12864	12495	0
[	Mo	98	0.338	ug/L	0.011	3	28	1917	4
	Y	89		ug/L			406158	519200	0
	Kr	83		ug/L			794	1041	1
[>	In	115		ug/L			1093664	1086133	1
[	Ag	107	~0.090	ug/L	0.004	4	42	1398	3
[	Cd	111	2.287	ug/L	0.054	2	115	12271	1
[	Cd	114	2.200	ug/L	0.039	1	65	28845	1
[	Sb	121	0.134	ug/L	0.004	2	182	2272	1
[	Sb	123	0.134	ug/L	0.002	1	151	1738	0
[	Ba	135	268.392	ug/L	1.752	0	15	1283878	0
[	Ba	137	274.410	ug/L	5.533	2	26	2278874	0
[>	Tb	159		ug/L			1253683	1264925	1
[	Tl	205	0.124	ug/L	0.002	2	128	4497	2
[	Pb	208	101.925	ug/L	1.514	1	347	4697453	0
[	Bi	209		ug/L			2594753	2501859	0
[	Th	232	4.709	ug/L	0.060	1	1408	215906	0
[	U	238	0.494	ug/L	0.007	1	31	24199	0

VR32 : 80481

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 16:07:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			923208	906886	1
	Be	**9**	**0.183**	ug/L	0.007	3	23	610	2
	C	**13**		ug/L			82469	100521	3
	Cl	**37**		ug/L			4833777	4844027	3
>	**Sc**	**45**		ug/L			1144296	1185910	1
	V	**51**	**7.359**	ug/L	0.190	2	9450	171575	1
	V-1	**51**	**7.253**	ug/L	0.119	1	48	159876	0
	Cr	**52**	**18.977**	ug/L	0.676	3	27897	377284	1
	Cr	**53**	**18.532**	ug/L	0.463	2	145	38891	1
	Mn	**55**	**531.699**	ug/L	8.572	1	487	13575654	1
	Co	**59**	**4.494**	ug/L	0.128	2	76	84458	1
>	**Ge**	**72**		ug/L			608948	586038	0
	Ni	**60**	**16.468**	ug/L	0.154	0	28	62362	0
	Ni	**62**	**16.722**	ug/L	0.418	2	64	9113	2
	Cu	**63**	**10.668**	ug/L	0.131	1	101	91936	1
	Cu	**65**	**10.842**	ug/L	0.121	1	39	41158	1
	Zn	**66**	**147.498**	ug/L	4.269	2	991	326995	2
	Zn	**67**	**142.459**	ug/L	2.771	1	141	52887	1
	Zn	**68**	**150.863**	ug/L	3.439	2	706	236926	2
	As	**75**	**3.815**	ug/L	0.029	0	318	8115	0
	As-1	**75**	**3.923**	ug/L	0.057	1	12623	19977	0
	Se	**82**	**0.092**	ug/L	0.041	44	-10	12	79
	Se	**78**	**0.208**	ug/L	0.188	90	12864	12498	0
	Mo	**98**	**0.155**	ug/L	0.003	2	28	881	2
	Y	**89**		ug/L			406158	445454	1
	Kr	**83**		ug/L			794	815	2
>	**In**	**115**		ug/L			1093664	1101014	0
	Ag	**107**	**0.062**	ug/L	0.002	2	42	989	3
	Cd	**111**	**2.568**	ug/L	0.045	1	115	13955	1
	Cd	**114**	**2.491**	ug/L	0.050	1	65	33106	1
	Sb	**121**	**0.044**	ug/L	0.004	7	182	886	5
	Sb	**123**	**0.042**	ug/L	0.001	2	151	655	1
	Ba	**135**	**188.786**	ug/L	0.952	0	15	915480	0
	Ba	**137**	**187.909**	ug/L	1.153	0	26	1582177	1
>	**Tb**	**159**		ug/L			1253683	1239269	1
	Tl	**205**	**0.131**	ug/L	0.002	1	128	4661	0
	Pb	**208**	**110.543**	ug/L	0.922	0	347	4991652	1
	Bi	**209**		ug/L			2594753	2531448	0
	Th	**232**	**1.406**	ug/L	0.016	1	1408	64126	1
	U	**238**	**0.178**	ug/L	0.002	1	31	8554	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:11:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			923208	909417	1
	Be	9	0.832	ug/L	0.016	1	23	2704	3
	C	13		ug/L			82469	148394	1
	Cl	37		ug/L			4833777	5123734	1
>	Sc	45		ug/L			1144296	1281224	1
	V	51	31.917	ug/L	0.798	2	9450	768735	2
	V-1	51	31.727	ug/L	0.429	1	48	755497	2
	Cr	52	83.023	ug/L	1.094	1	27897	1678197	0
	Cr	53	81.997	ug/L	1.529	1	145	185402	2
	Mn	55	2312.041	ug/L	42.127	1	487	63771132	1
	Co	59	19.372	ug/L	0.581	2	76	393121	3
>	Ge	72		ug/L			608948	585389	1
	Ni	60	76.083	ug/L	0.520	0	28	287712	1
	Ni	62	77.601	ug/L	2.140	2	64	42012	1
	Cu	63	47.863	ug/L	1.363	2	101	411675	2
	Cu	65	48.629	ug/L	1.190	2	39	184280	2
	Zn	66	648.708	ug/L	19.953	3	991	1432946	1
	Zn	67	636.379	ug/L	15.641	2	141	235496	1
	Zn	68	686.783	ug/L	19.863	2	706	1074661	1
	As	75	17.390	ug/L	0.433	2	318	35852	1
	As-1	75	17.668	ug/L	0.531	3	12623	47345	0
	Se	82	0.168	ug/L	0.049	29	-10	31	38
	Se	78	0.147	ug/L	0.346	234	12864	12448	0
	Mo	98	0.714	ug/L	0.013	1	28	3944	3
	Y	89		ug/L			406158	611038	1
	Kr	83		ug/L			794	1158	2
>	In	115		ug/L			1093664	1104588	1
	Ag	107	0.270	ug/L	0.004	1	42	4194	0
	Cd	111	11.228	ug/L	0.163	1	115	60834	1
	Cd	114	11.195	ug/L	0.191	1	65	149040	0
	Sb	121	0.215	ug/L	0.006	2	182	3585	2
	Sb	123	0.207	ug/L	0.001	0	151	2647	1
	Ba	135	897.432	ug/L	13.013	1	15	4365768	1
	Ba	137	886.601	ug/L	10.040	1	26	7488478	0
>	Tb	159		ug/L			1253683	1258545	0
	Tl	205	0.614	ug/L	0.011	1	128	21693	1
	Pb	208	512.663	ug/L	5.144	1	347	23508449	0
	Bi	209		ug/L			2594753	2430312	0
	Th	232	6.397	ug/L	0.023	0	1408	291352	0
	U	238	0.817	ug/L	0 008	0	31	39765	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 16:15:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	917752	0
	Be	9	0.176	ug/L	0.013	7	23	594	7
	C	13		ug/L			82469	97876	3
	Cl	37		ug/L			4833777	4885750	0
>	Sc	45		ug/L			1144296	1181392	0
	V	51	7.557	ug/L	0.026	0	9450	175302	0
	V-1	51	7.613	ug/L	0.048	0	48	167193	0
	Cr	52	21.482	ug/L	0.135	0	27897	421792	0
	Cr	53	21.565	ug/L	0.330	1	145	45069	1
	Mn	55	360.287	ug/L	1.226	0	487	9164930	0
	Co	59	4.456	ug/L	0.071	1	76	83432	1
>	Ge	72		ug/L			608948	594744	2
	Ni	60	19.347	ug/L	0.412	2	28	74334	1
	Ni	62	19.641	ug/L	0.820	4	64	10850	3
	Cu	63	8.924	ug/L	0.214	2	101	78043	1
	Cu	65	9.167	ug/L	0.275	2	39	35312	2
	Zn	66	96.045	ug/L	1.968	2	991	216373	0
	Zn	67	97.557	ug/L	4.953	5	141	36779	3
	Zn	68	100.375	ug/L	2.857	2	706	160144	1
	As	75	3.424	ug/L	0.039	1	318	7422	1
	As-1	75	3.431	ug/L	0.233	6	12623	19272	0
	Se	82	0.049	ug/L	0.068	137	-10	2	719
	Se	78	-0.117	ug/L	0.668	572	12864	12492	1
	Mo	98	0.142	ug/L	0.001	0	28	817	2
	Y	89		ug/L			406158	441118	3
	Kr	83		ug/L			794	856	0
>	In	115		ug/L			1093664	1084684	1
	Ag	107	0.059	ug/L	0.002	3	42	935	2
	Cd	111	1.478	ug/L	0.045	3	115	7961	1
	Cd	114	1.432	ug/L	0.039	2	65	18775	1
	Sb	121	0.015	ug/L	0.001	5	182	413	1
	Sb	123	0.015	ug/L	0.002	12	151	326	5
	Ba	135	157.830	ug/L	3.522	2	15	753851	0
	Ba	137	157.037	ug/L	2 737	1	26	1302378	0
>	Tb	159		ug/L			1253683	1229351	0
	Tl	205	0.105	ug/L	0.003	2	128	3715	1
	Pb	208	71.243	ug/L	0.529	0	347	3191486	0
	Bi	209		ug/L			2594753	2497975	1
	Th	232	1.291	ug/L	0.011	0	1408	58520	0
	U	238	0.176	ug/L	0.001	0	31	8373	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:19:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			923208	926839	1
	Be	9	0.861	ug/L	0.029	3	23	2847	2
	C	13		ug/L			82469	140938	1
	Cl	37		ug/L			4833777	4876213	1
>	Sc	45		ug/L			1144296	1329777	2
	V	51	35.045	ug/L	0.712	2	9450	875217	3
	V-1	51	34.540	ug/L	0.824	2	48	853368	1
	Cr	52	99.953	ug/L	2.027	2	27897	2090226	1
	Cr	53	97.763	ug/L	5.199	5	145	229208	3
	Mn	55	1578.929	ug/L	16.272	1	487	45202034	1
	Co	59	19.543	ug/L	0.517	2	76	411507	2
>	Ge	72		ug/L			608948	588402	0
	Ni	60	95.713	ug/L	2.159	2	28	363746	1
	Ni	62	98.281	ug/L	1.651	1	64	53474	0
	Cu	63	43.981	ug/L	0.848	1	101	380268	2
	Cu	65	45.190	ug/L	1.033	2	39	172121	2
	Zn	66	446.542	ug/L	6.613	1	991	991992	1
	Zn	67	454.711	ug/L	7.106	1	141	169193	1
	Zn	68	467.935	ug/L	7.941	1	706	736310	0
	As	75	16.723	ug/L	0.065	0	318	34674	0
	As-1	75	17.010	ug/L	0.148	0	12623	46279	0
	Se	82	0.028	ug/L	0.070	253	-10	-2	574
	Se	78	0.197	ug/L	0.257	130	12864	12542	0
	Mo	98	0.706	ug/L	0.020	2	28	3918	2
	Y	89		ug/L			406158	598325	1
	Kr	83		ug/L			794	1244	0
>	In	115		ug/L			1093664	1116755	1
	Ag	107	0.273	ug/L	0.009	3	42	4286	3
	Cd	111	6.746	ug/L	0.125	1	115	36992	0
	Cd	114	6.577	ug/L	0.060	0	65	88571	2
	Sb	121	0.093	ug/L	0.002	1	182	1674	0
	Sb	123	0.092	ug/L	0.005	5	151	1267	3
	Ba	135	781.757	ug/L	14.859	1	15	3844774	1
	Ba	137	777.428	ug/L	17.815	2	26	6638076	1
>	Tb	159		ug/L			1253683	1257809	0
	Tl	205	0.521	ug/L	0.007	1	128	18417	1
	Pb	208	356.615	ug/L	3.328	0	347	16343454	0
	Bi	209		ug/L			2594753	2434150	0
	Th	232	6.350	ug/L	0.097	1	1408	289049	0
	U	238	0.840	ug/L	0.019	2	31	40871	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 16:23:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			923208	896633 ✓	1
	Be	9	50.153	ug/L	0.433	0	23	159267	1
	C	13		ug/L			82469	82279	2
	Cl	37		ug/L			4833777	4946278	1
>	Sc	45		ug/L			1144296	1135888 ✓	1
	V	51	49.833	ug/L	1.009	2	9450	1058871	2
	V-1	51	49.761	ug/L	1.395	2	48	1050297	2
	Cr	52	50.402	ug/L	0.612	1	27897	914351	2
	Cr	53	50.155	ug/L	0.915	1	145	100579	1
	Mn	55	49.946	ug/L	1.569	3	487	1221584	1
	Co	59	49.336	ug/L	0.314	0	76	887426	1
>	Ge	72		ug/L			608948	578598 ✓	0
	Ni	60	50.303	ug/L	1.102	2	28	188005	1
	Ni	62	49.159	ug/L	0.755	1	64	26332	1
	Cu	63	50.489	ug/L	0.582	1	101	429236	0
	Cu	65	51.021	ug/L	0.752	1	39	191083	0
	Zn	66	50.085	ug/L	0.656	1	991	110253	1
	Zn	67	50.809	ug/L	0.290	0	141	18710	0
	Zn	68	50.783	ug/L	1.166	2	706	79178	1
	As	75	50.601	ug/L	0.482	0	318	102556	0
	As-1	75	50.646	ug/L	0.272	0	12623	111784	0
	Se	82	50.332	ug/L	1.203	2	-10	12066	1
	Se	78	50.492	ug/L	0 574	1	12864	40466	0
	Mo	98	50.092	ug/L	1.293	2	28	271506	2
	Y	89		ug/L			406158	384730	0
	Kr	83		ug/L			794	789	4
>	In	115		ug/L			1093664	1039243 ✓	0
	Ag	107	49.196	ug/L	1.312	2	42	711321	2
	Cd	111	50.586	ug/L	1.112	2	115	257493	2
	Cd	114	51.618	ug/L	0.442	0	65	646382	1
	Sb	121	51.087	ug/L	0.012	0	182	761722	0
	Sb	123	50.523	ug/L	0.891	1	151	571766	1
	Ba	135	50.427	ug/L	0.708	1	15	230836	1
	Ba	137	50.637	ug/L	0.255	0	26	402449	0
>	Tb	159		ug/L			1253683	1195386 ✓	0
	Tl	205	49.988	ug/L	1.110	2	128	1667347	1
	Pb	208	50.184	ug/L	0.806	1	347	2185955	0
	Bi	209		ug/L			2594753	2399371	1
	Th	232	52.689	ug/L	1.151	2	1408	2269382	1
	U	238	53.276	ug/L	0.580	1	31	2460937	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 16:30:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	858012	0
[	Be	9	0.003	ug/L	0.008	252	23	31	73
	C	13		ug/L			82469	81067	2
	Cl	37		ug/L			4833777	4759199	0
[>	Sc	45		ug/L			1144296	1116609	1
[	V	51	0.019	ug/L	0.017	89	9450	9602	2
[	V-1	51	0.009	ug/L	0.011	122	48	231	96
[	Cr	52	0.049	ug/L	0.041	82	27897	28063	1
[	Cr	53	0.016	ug/L	0.015	93	145	174	16
[	Mn	55	0.165	ug/L	0.193	117	487	4400	103
[	Co	59	0.007	ug/L	0.008	115	76	191	69
[>	Ge	72		ug/L			608948	572798	1
[	Ni	60	0.015	ug/L	0.016	108	28	81	71
[	Ni	62	-0.008	ug/L	0.011	141	64	56	9
[	Cu	63	0.012	ug/L	0.013	102	101	198	52
[	Cu	65	0.012	ug/L	0.011	90	39	82	48
[	Zn	66	-0.226	ug/L	0.057	25	991	442	26
[	Zn	67	-0.198	ug/L	0.048	24	141	61	27
[	Zn	68	-0.201	ug/L	0.058	28	706	356	23
[	As	75	0.027	ug/L	0.007	26	318	352	3
[	As-1	75	0.141	ug/L	0.164	116	12623	12145	1
[	Se	82	0.043	ug/L	0.054	125	-10	0	2179
[	Se	78	0.494	ug/L	0.561	113	12864	12371	1
[	Mo	98	0.008	ug/L	0.006	77	28	68	45
	Y	89		ug/L			406158	372856	1
	Kr	83		ug/L			794	781	5
[>	In	115		ug/L			1093664	1038259	1
[	Ag	107	0.003	ug/L	0.005	136	42	89	76
[	Cd	111	0.002	ug/L	0.005	212	115	121	20
[	Cd	114	0.004	ug/L	0.006	166	65	107	70
[	Sb	121	0.044	ug/L	0.010	23	182	822	18
[	Sb	123	0.042	ug/L	0.007	16	151	621	12
[	Ba	135	0.052	ug/L	0.044	85	15	250	81
[	Ba	137	0.049	ug/L	0.042	85	26	418	81
[>	Tb	159		ug/L			1253683	1155718	0
[	Tl	205	0.010	ug/L	0.008	78	128	435	56
[	Pb	208	0.022	ug/L	0.022	101	347	1242	75
[	Bi	209		ug/L			2594753	2449475	0
[	Th	232	0.070	ug/L	0.010	13	1408	4199	9
[	U	238	0.006	ug/L	0.006	102	31	290	92

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 1 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD 0.0	5MM	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			7.26	Beg in CUP %R=91 ✓
ICB			-0.01	✓
CCV1			3.69	%R=92 ✓
CCB1			-0.00	✓
CRA			0.10	✓
VSIB MB1			0.01	✓
" MB1SPK			1.90	%R=95 ✓
" A			1.08	
" ADUP			1.05	RPD=2.81 ✓
" ASPK			2.04	%R=96 ✓
" B				
" C				
" D				
" E				
CCV2			3.65	%R=91 ✓
CCB2			0.00	✓
VSIB F				DEL CV OUT
" G				
" H				
" I				
" J				
" K				
" L				

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 2 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR37 MB1	5mm	1x	0.00	DEL CV out ✓
" MB1SPK			8.04	%R=102 ✓
" A			0.19	
CCV3			1.76	%R=44 LOW X
CCV4			3.63	%R=91 ✓
CCB3			0.00	✓
VS18 F				
" G				
" H				
" I				
" J				
" K				
" L				
VR37 MB1			0.01	✓
" MB1SPK			1.74	%R=87 ✓
" A			0.16	
CCV5			3.59	%R=90 ✓
CCB4			0.00	✓
VR37 ADUP			0.15	✓
" ASPK			1.12	%R=96 ✓
" B				
" C				
" D				
" E				
" F				
" G				
" H				
" I				
CCV6			3.60	%R=90 ✓
CCB5	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-7-12

Page: 3 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
VR87	J	SMM	1X		
"	K				
"	L				
"	M				
"	N				
"	O				
VR88	MB1			-0.00	✓
"	MB1SPK			1.81	%R=91 ✓
"	A			0.11	
"	ADUP			0.10	✓
CCV7				3.64	%R=91 ✓
CCB6				0.00	✓
VR88	ASPK			1.07	%R=96 ✓
"	B				
"	C				
"	D				
"	E				
"	F				
"	G				
"	H				
"	I				
"	J				
CCV8				3.61	%R=90 ✓
CCB7				-0.00	✓
VR82	A				
"	B				
"	C				
"	D				
"	E				
"	F	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 4 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR82 G	SMM	1X		
" H				
" I				
CCV9			3.56	%R=89 ✓
CCB8			0.00	✓
VR30 MB1			-0.00	✓
" MB1SPK			1.82	%R=91 ✓
" A			0.92	
" ADUP			0.93	RPD=1.08 ✓
" ASPK			1.78	%R=86 ✓
" B				
" C				
" D				
" E				
" F				
CCV10			3.71	%R=93 ✓
CCB9			-0.00	✓
VR30 G				
" H				
" I				
" J				
" K				
" L				
VR36 MB1			0.00	✓
" MB1SPK			1.89	%R=95 ✓
" A			0.77	
" ADUP			0.74	RPD=3.97 ✓
CCV11			3.72	%R=93 ✓
CCB10			0.00	✓
VR36 ASPK	↓	↓	1.72	%R=95 ✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2092-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 5 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR36 B	SMM	1X		
" C				
" D				
" E				
" F				
" G				
" H				
" I				
" J				
CCV12			3.66	%R=92 ✓
CCB11			-0.00	✓
VR36 K				
" L				
VR35 MB1			0.00	✓
" MB1SPK			1.84	%R=92 ✓
" A			0.34	
" ADUP			0.34	✓
" ASPK			1.29	%R=95 ✓
" B				
" C				
" D				
CCV13			3.61	%R=90 ✓
CCB12			-0.03	✓
VR35 E				
" F				
" G				
" H				
" I				
" J				
" K	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 29927

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 6 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR35 L	5mm	1x		
CCV14			3.55	%R=89 ✓
CCB13			-0.00	✓
VR32 MB1			0.01	✓
" MBSPK			1.79	%R=90 ✓
" A			0.47	
" ADUP			0.44	✓
" ASPK			1.37	%R=90 ✓
" B				
" C				
" D				
" E				
" F				
CCV15			3.45	%R=86 ✓
CCB14			-0.00	✓
VR32 G				
" H				
" I				
" J				
" K				
" L				
VR65 MB1			0.03	✓
" MBSPK			1.74	%R=87 ✓
" A			1.22	
" ADUP			1.18	RPD=3.33 ✓
CCV16			3.54	%R=89 ✓
CCB15			0.00	✓
VR65 ASPK			2.08	%R=86 ✓
" B				
" C				

AA11-2012

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2320

Standard ID:

Standard: 2992-7

ICV/CCV: SC-12

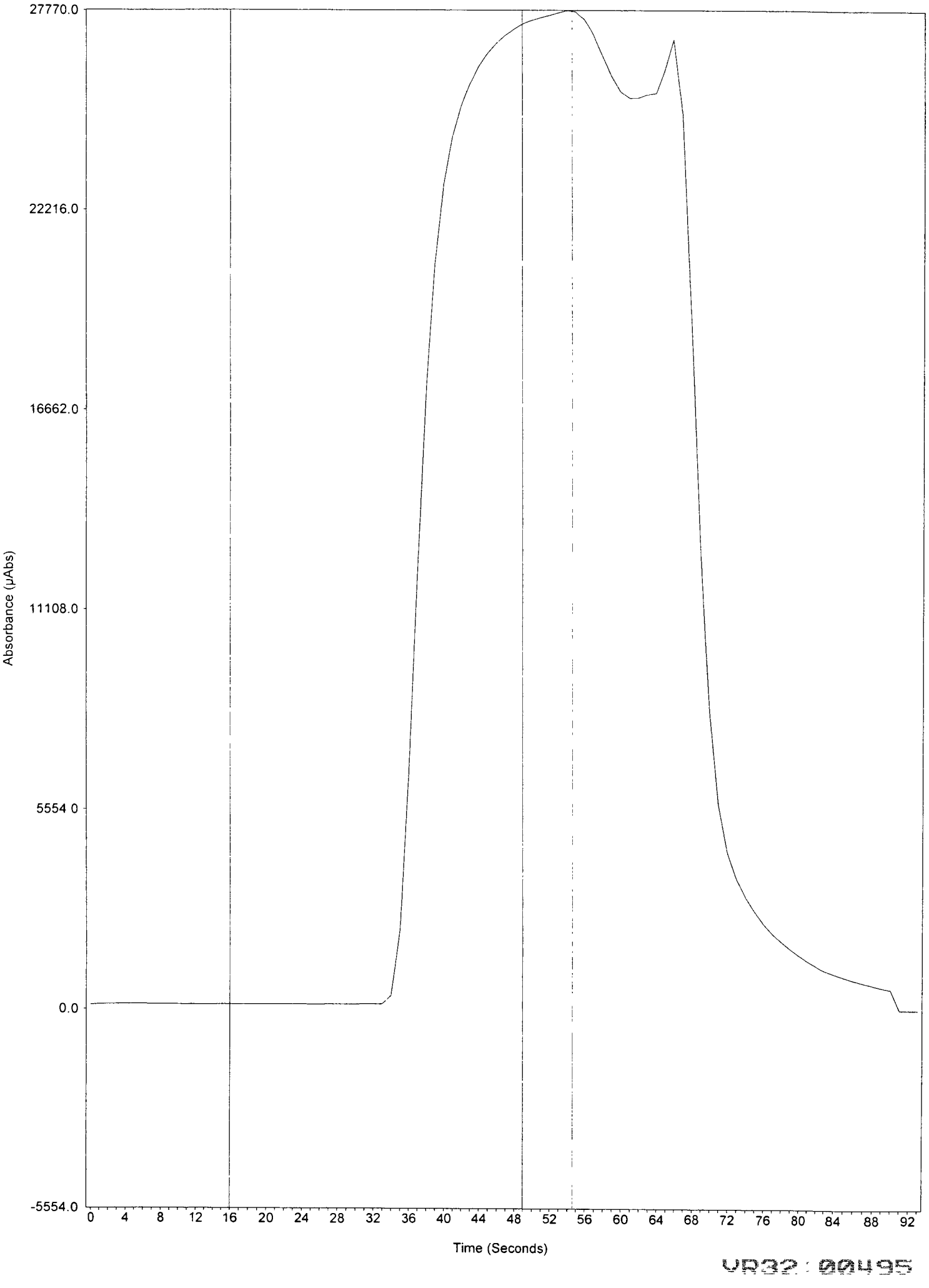
VR32 : 08493

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 11-17-12

	Analyst 11-17 om	Peer 11-19	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓		
Calibration Verification			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	✓	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See VR33 ASPC
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Anomaly Information	✓	✓	See CAF


27770.0
22216.0
16662.0
11108.0
5554 0
0.0
-5554.0
Absorbance (µAbs)
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92
Time (Seconds)
UP32:00495

CETAC Hg Analysis Report - 12111700.DB - Saturday, November 17, 2012, 2:36:51 PM

✓ 11-19-12 AS

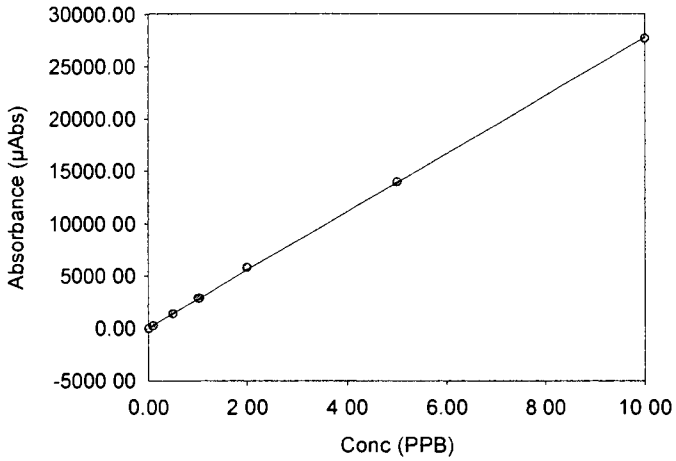
Analyst
Date Started Saturday, November 17, 2012, 06:44:12
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	17-Nov-2012, 06:44	10 00	0.46	27500.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	17-Nov-2012, 06:46	0 00	4.58	-33 10	1.00	
Standard #1	17-Nov-2012, 06 47	0.10	0.53	261 00	1 00	
Standard #2	17-Nov-2012, 06:49	0.50	0.24	1400 00	1 00	
Standard #3	17-Nov-2012, 06:51	1 00	0 45	2840 00	1 00	
Standard #4	17-Nov-2012, 06:52	2.00	0.54	5790.00	1.00	
Standard #5	17-Nov-2012, 06.54	5.00	0.29	14000.00	1 00	
Standard #6	17-Nov-2012, 06.56	10 00	0 39	27700 00	1.00	

Calibration Data



Int.	0.000
Slope	2778 015
Correlation	0 99994

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	17-Nov-2012, 07:05	7 26	0.75	20200 00	1.00	
ICB	17-Nov-2012, 07:06	-0.01	13.00	-18.40	1 00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07 08	3.69	0.28	10200 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:09	-0.00	56.00	-2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	17-Nov-2012, 07:11	0 10	0.42	267 00	1 00	
VS18 MB1 SMM	17-Nov-2012, 07:13	0 01	13.00	20.30	1.00	
VS18 MB1SPK SMM	17-Nov-2012, 07:14	1 90	0 60	5270.00	1 00	
VS18 A SMM	17-Nov-2012, 07:16	1.08	0.64	3000.00	1.00	
VS18 ADUP SMM	17-Nov-2012, 07:17	1.05	0 46	2910.00	1.00	
VS18 ASPK SMM	17-Nov-2012, 07:19	2.04	0.80	5660 00	1.00	
VS18 B SMM	17-Nov-2012, 07:21	0.70	0.68	1940 00	1 00	
VS18 C SMM	17-Nov-2012, 07:22	0.59	0.86	1640.00	1.00	
VS18 D SMM	17-Nov-2012, 07:24	0.77	0.48	2150.00	1.00	
VS18 E SMM	17-Nov-2012, 07 26	0.71	0.45	1970.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:27	3.65	0.49	10100.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 07:29:22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:29	0.00	11 10	10 40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 07:31	0.31	1.08	873 00	1 00	
VS18 G SMM	17-Nov-2012, 07:32	0.25	0.62	691.00	1 00	
VS18 H SMM	17-Nov-2012, 07:34	1.02	1 42	2840 00	1.00	
VS18 I SMM	17-Nov-2012, 07:35	3.94	0.68	10900 00	1.00	
VS18 J SMM	17-Nov-2012, 07:37	2 53	0.19	7030.00	1.00	
VS18 K SMM	17-Nov-2012, 07:38	1.94	0 22	5380 00	1.00	
VS18 L SMM	17-Nov-2012, 07 40	0.88	0.27	2440 00	1.00	
VR37 MB1 SMM	17-Nov-2012, 07 42	0 00	17.70	12 90	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 07:43	2 04	0.47	5660.00	1.00	
VR37 A SMM	17-Nov-2012, 07:45	0.19	0.58	514 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:47	1.76	0.86	4880.00	1.00	Q - LOW %R
QC Standard	17-Nov-2012, 07:58	3 63	0.54	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08.00	0 00	11.60	11.60	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 08:02	0.30	0.58	846.00	1.00	
VS18 G SMM	17-Nov-2012, 08.03	0.25	0.72	683 00	1.00	
VS18 H SMM	17-Nov-2012, 08.05	1.00	0 78	2780 00	1.00	
VS18 I SMM	17-Nov-2012, 08:06	3.88	0 67	10800.00	1.00	
VS18 J SMM	17-Nov-2012, 08:08	2.42	0.57	6730 00	1 00	
VS18 K SMM	17-Nov-2012, 08:09	1.81	0.67	5030 00	1.00	
VS18 L SMM	17-Nov-2012, 08.11	0.79	0.94	2190.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 08:13	0.01	4.00	19 20	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 08:14	1.74	0.56	4840 00	1.00	
VR37 A SMM	17-Nov-2012, 08:16	0.16	1.44	442.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08.18	3 59	0.50	9980.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:19	0.00	13.00	9 15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 ADUP SMM	17-Nov-2012, 08 21	0.15	0.54	416.00	1 00	
VR37 ASPK SMM	17-Nov-2012, 08:23	1.12	0.62	3120.00	1.00	
VR37 B SMM	17-Nov-2012, 08 24	0.09	0 36	242 00	1.00	
VR37 C SMM	17-Nov-2012, 08:26	0 28	1.03	768 00	1.00	
VR37 D SMM	17-Nov-2012, 08:27	1.41	0.61	3910.00	1.00	
VR37 E SMM	17-Nov-2012, 08.29	2.23	0.82	6190 00	1.00	
VR37 F SMM	17-Nov-2012, 08:31	0.79	0.67	2210.00	1.00	
VR37 G SMM	17-Nov-2012, 08.32	2.39	0.51	6630.00	1.00	
VR37 H SMM	17-Nov-2012, 08:34	3.87	0.37	10800.00	1 00	
VR37 I SMM	17-Nov-2012, 08:35	0 48	0.20	1340 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:37	3.60	0.66	9990.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:39	0.00	124.00	1.77	1.00	

Analyst
Date Started Saturday, November 17, 2012, 08:40:49
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 J SMM	17-Nov-2012, 08:40	1 27	0 51	3520.00	1.00	
VR37 K SMM	17-Nov-2012, 08:42	1.51	2.55	4190.00	1.00	
VR37 L SMM	17-Nov-2012, 08:44	1.16	0 58	3220 00	1.00	
VR37 M SMM	17-Nov-2012, 08:45	1 05	0.38	2900.00	1.00	
VR37 N SMM	17-Nov-2012, 08:47	1 19	0.74	3310.00	1 00	
VR37 O SMM	17-Nov-2012, 08.48	0.83	0.81	2300 00	1.00	
VR58 MB1 SMM	17-Nov-2012, 08:50	-0.00	33 50	-6.40	1.00	
VR58 MB1SPK SMM	17-Nov-2012, 08.52	1.81	0.54	5040.00	1.00	
VR58 A SMM	17-Nov-2012, 08:53	0.11	0.89	295 00	1 00	
VR58 ADUP SMM	17-Nov-2012, 08:55	0 10	0.57	281 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:56	3.64	0.48	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:58	0.00	9.27	8.18	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR58 ASPK SMM	17-Nov-2012, 09:00	1.07	0.63	2970.00	1.00	
VR58 B SMM	17-Nov-2012, 09:01	0.10	0 59	283.00	1 00	
VR58 C SMM	17-Nov-2012, 09:03	0.11	0.53	309 00	1.00	
VR58 D SMM	17-Nov-2012, 09:05	0.10	0.66	274 00	1 00	
VR58 E SMM	17-Nov-2012, 09:06	0 11	0 48	304 00	1 00	
VR58 F SMM	17-Nov-2012, 09 08	0 41	0.62	1150.00	1.00	
VR58 G SMM	17-Nov-2012, 09:10	0 06	0.39	175.00	1 00	
VR58 H SMM	17-Nov-2012, 09:11	0.06	0 63	161.00	1.00	
VR58 I SMM	17-Nov-2012, 09.13	0.10	1.03	271.00	1.00	
VR58 J SMM	17-Nov-2012, 09.14	0 05	1.41	126.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:16	3 61	0.66	10000 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:18	-0.00	300.00	-1.14	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR82 A SMM	17-Nov-2012, 09 19	0.22	0 73	605.00	1.00	
VR82 B SMM	17-Nov-2012, 09:21	0.10	2.50	265.00	1 00	
VR82 C SMM	17-Nov-2012, 09:23	0.08	1.51	214.00	1 00	
VR82 D SMM	17-Nov-2012, 09:24	0.11	1.66	312.00	1 00	
VR82 E SMM	17-Nov-2012, 09.26	0.15	0.65	428.00	1.00	
VR82 F SMM	17-Nov-2012, 09:28	0 16	0.78	453 00	1.00	
VR82 G SMM	17-Nov-2012, 09:29	0 13	0.84	355.00	1.00	
VR82 H SMM	17-Nov-2012, 09:31	0 12	0.60	343 00	1.00	
VR82 I SMM	17-Nov-2012, 09:32	0 12	0.86	328 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:34	3.56	0.61	9900 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09.36	0.00	42.80	6.11	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 MB1 SMM	17-Nov-2012, 09:38	-0.00	64.10	-2.94	1.00	
VR30 MB1SPK SMM	17-Nov-2012, 09:39	1.82	0.61	5060.00	1.00	
VR30 A SMM	17-Nov-2012, 09 41	0 92	0.74	2550.00	1.00	
VR30 ADUP SMM	17-Nov-2012, 09.43	0.93	0.60	2590.00	1.00	
VR30 ASPK SMM	17-Nov-2012, 09:44	1.78	0.74	4940 00	1.00	
VR30 B SMM	17-Nov-2012, 09:46	0.58	0.75	1620 00	1.00	
VR30 C SMM	17-Nov-2012, 09:47	0.68	0.60	1890.00	1.00	
VR30 D SMM	17-Nov-2012, 09:49	0.80	0.75	2230 00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 09:51:06
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 E SMM	17-Nov-2012, 09 51	0.55	0.51	1540.00	1 00	
VR30 F SMM	17-Nov-2012, 09.52	0 67	0.54	1860.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:54	3 71	0.80	10300 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:56	-0.00	235.00	-1 21	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 G SMM	17-Nov-2012, 09:57	0 82	0.55	2280.00	1.00	
VR30 H SMM	17-Nov-2012, 09:59	0.58	0.47	1610 00	1.00	
VR30 I SMM	17-Nov-2012, 10:00	0 60	1.07	1670 00	1.00	
VR30 J SMM	17-Nov-2012, 10:02	0 53	3.49	1480 00	1 00	
VR30 K SMM	17-Nov-2012, 10.04	0.67	0.52	1870 00	1.00	
VR30 L SMM	17-Nov-2012, 10:05	0 81	0.51	2260 00	1.00	
VR36 MB1 SMM	17-Nov-2012, 10:07	0.00	24.00	6.55	1.00	
VR36 MB1SPK SMM	17-Nov-2012, 10:08	1.89	0.89	5240 00	1 00	
VR36 A SMM	17-Nov-2012, 10:10	0.77	0.47	2130 00	1.00	
VR36 ADUP SMM	17-Nov-2012, 10:12	0.74	0.37	2050.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10.13	3.72	0 44	10300.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10.15	0 00	103.00	2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 ASPK SMM	17-Nov-2012, 10:17	1.72	0.45	4770 00	1 00	
VR36 B SMM	17-Nov-2012, 10:18	2.59	0.47	7210.00	1 00	
VR36 C SMM	17-Nov-2012, 10.20	1 64	0 64	4540.00	1.00	
VR36 D SMM	17-Nov-2012, 10.22	1.79	0.44	4980.00	1.00	
VR36 E SMM	17-Nov-2012, 10.23	0.37	0.51	1040.00	1.00	
VR36 F SMM	17-Nov-2012, 10.25	0 18	0.87	511 00	1.00	
VR36 G SMM	17-Nov-2012, 10:26	0.13	0.85	371.00	1.00	
VR36 H SMM	17-Nov-2012, 10:28	1.34	0.57	3710.00	1 00	
VR36 I SMM	17-Nov-2012, 10:30	1.20	0 50	3330 00	1.00	
VR36 J SMM	17-Nov-2012, 10 31	1.04	0.35	2890 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10.33	3.66	0.32	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:34	-0.00	6.61	-7.46	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 K SMM	17-Nov-2012, 10:36	2.70	0.46	7500.00	1.00	
VR36 L SMM	17-Nov-2012, 10:38	0.27	0.35	752.00	1.00	
VR35 MB1 SMM	17-Nov-2012, 10.39	0.00	17.80	8 76	1 00	
VR35 MB1SPK SMM	17-Nov-2012, 10:41	1.84	0 58	5120 00	1 00	
VR35 A SMM	17-Nov-2012, 10:43	0.34	0.50	941 00	1 00	
VR35 ADUP SMM	17-Nov-2012, 10:44	0.34	0.37	935.00	1.00	
VR35 ASPK SMM	17-Nov-2012, 10.46	1.29	0.57	3580 00	1.00	
VR35 B SMM	17-Nov-2012, 10:48	0 42	0.73	1160.00	1.00	
VR35 C SMM	17-Nov-2012, 10:49	0.07	1 65	193.00	1.00	
VR35 D SMM	17-Nov-2012, 10:51	0.06	0.49	162.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 10:52:53
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:52	3 61	0 66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10.54	-0.03	5.41	-77.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR35 E SMM	17-Nov-2012, 10:56	0.23	0.62	648 00	1.00	
VR35 F SMM	17-Nov-2012, 10:57	1.55	0.66	4300 00	1.00	
VR35 G SMM	17-Nov-2012, 10 59	1.46	0.62	4060.00	1 00	
VR35 H SMM	17-Nov-2012, 11.01	0.41	0.48	1140.00	1 00	
VR35 I SMM	17-Nov-2012, 11:02	1.17	1.09	3260 00	1.00	
VR35 J SMM	17-Nov-2012, 11.04	0.93	0.51	2590 00	1 00	
VR35 K SMM	17-Nov-2012, 11:06	1.11	0.64	3080 00	1 00	
VR35 L SMM	17-Nov-2012, 11:07	1 31	0.58	3630 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:09	3.55	0 50	9850.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:11	-0.00	33 50	-2.69	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 MB1 SMM	17-Nov-2012, 11:13	0.01	3.64	20.40	1 00	
VR32 MB1SPK SMM	17-Nov-2012, 11:14	1 79	0.83	4960.00	1.00	
VR32 A SMM	17-Nov-2012, 11:16	0 47	0.63	1300 00	1 00	
VR32 ADUP SMM	17-Nov-2012, 11:17	0.44	0.66	1220.00	1.00	
VR32 ASPK SMM	17-Nov-2012, 11:19	1.37	0.54	3810 00	1 00	
VR32 B SMM	17-Nov-2012, 11.21	0.82	0.58	2280 00	1.00	
VR32 C SMM	17-Nov-2012, 11:22	0.31	0.79	871 00	1 00	
VR32 D SMM	17-Nov-2012, 11:24	0.43	0.58	1200 00	1.00	
VR32 E SMM	17-Nov-2012, 11:25	0.50	0.71	1390 00	1.00	
VR32 F SMM	17-Nov-2012, 11:27	0.39	0.77	1080 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:29	3.45	0.56	9570.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:30	-0.00	49.10	-3 41	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 G SMM	17-Nov-2012, 11:32	0.31	0.19	870 00	1.00	
VR32 H SMM	17-Nov-2012, 11:34	0.24	0.61	659 00	1 00	
VR32 I SMM	17-Nov-2012, 11:35	0.25	0.45	692.00	1 00	
VR32 J SMM	17-Nov-2012, 11:37	0.17	0 58	483.00	1.00	
VR32 K SMM	17-Nov-2012, 11:38	0 37	0.81	1020.00	1.00	
VR32 L SMM	17-Nov-2012, 11:40	2.05	0.61	5700.00	1 00	
VR65 MB1 SMM	17-Nov-2012, 11:42	0.03	1.01	82.40	1.00	
VR65 MB1SPK SMM	17-Nov-2012, 11:43	1.74	0.69	4820.00	1.00	
VR65 A SMM	17-Nov-2012, 11:45	1.22	0.84	3390.00	1.00	
VR65 ADUP SMM	17-Nov-2012, 11:46	1.18	0.77	3290.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:48	3 54	0.50	9830.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:50	0.00	38.40	2 95	1.00	

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0 10 PPB
Calibration Standard #2 Conc.:	0 50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 . 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM Instrument: CETAC
Analyst: DM Date: 11-16-12
Bath Temp: 95°C Start Time: 1213 End Time: 1243

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2992-7	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	56-18	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

Prep Code: TLM Digested 20.0mL Instrument: CETAC
Analyst: DM Date: 11-15-12
Bath Temp: 95°C Start Time: 1247 End Time: 1447

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	2992-8	0.02	↓	0.02	1
STD2	↓	0.05	↓	0.05	1
STD3	↓	0.10	↓	0.1	1
STD4	↓	0.20	↓	0.2	1
STD5	↓	~~0.50~~ 0.4	↓	0.4	1
STD6	↓	1.00	↓	1.00	1
CRA	↓	002	↓	002	1
ICB/CCB	—	0.00	↓	0.0	1
ICV/LCS	2992-9	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:
HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: NB
Bath Temp: 93°C
Start Time: 1342
Matrix: SOIL
Date: 11-14-12
End Time: 1412

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR32A	1	—	0.733	50.0	11-18 1	YES	
" ADUP	1	—	0.732		1		
" ASPK	1	—	0.736		1		
" B	1	—	0.703		1		
" C	1	—	0.721		1		
" D	1	—	0.717		1		
" E	1	—	0.714		1		
" F	1	—	0.735		1		
" G	1	—	0.748		1		
" H	1	—	0.718		1		
" I	1	—	0.733		1		
" J	1	—	0.71[illegible]		1		
" K	1	—	0.74[illegible]		1		
" L	1	—	0.737		1		
" MBI	—	—	—		1		
" MBSPK	—	—	—	50.0	1		

NB 11-14-12

Chemical/Reagent ID:

HNO_3: [illegible]
H_2SO_4: [illegible]
HCl: —
5% $K_2S_2O_8$: [illegible]
5% $KMnO_4$: [illegible]
Digest Tube Lot: 1205258

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR32

W
11-15-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 11/12/12 (C)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 18:31

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time	*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm	*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
11/12/2012 18:31 date/time in oven	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
11/13/2012 9:58 date/time out		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs = 15.5		*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	11/12/12 17:24 KE	11/12/12 18:09 KE	11/13/12 10:12 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	Cal OK!	Cal OK!	Cal OK!										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank			1.0952	1.0950			0.00							
VR31 I 1		6.0678	1.1028	5.8541			4.75	95.7%						
VR31 I 1 dup		6.0649	1.1166	5.9694			4.85	98.1%						
							RPD =	2.45%				RPD =	NA	
VR31 I 1 trp		6.1533	1.0929	6.0624			4.97	98.2%						
							RSD =	1.45%				RSD =	NA	
VR31 J 1		6.1942	1.0727	6.1138			5.04	98.4%						
VR31 K1		6.5827	1.1017	6.4743			5.37	98.0%						
VR31 L1		6.5713	1.0866	6.4299			5.34	97.4%						
VR32 A1		6.3546	1.0866	6.2210			5.15	97.5%						
VR32 B1		6.3523	1.0839	6.2392			5.16	97.9%						
VR32 C1		6.8896	1.0895	6.7346			5.65	97.3%						
VR32 D1		6.7523	1.0915	6.6132			5.52	97.6%						
VR32 E1		6.0662	1.0804	5.9423			4.86	97.5%						
VR32 F1		6.7568	1.0869	6.6309			5.54	97.9%						
VR32 G1		6.3739	1.1179	6.2795			5.16	98.2%						
VR32 H1		6.1536	1.0917	6.0659			4.97	98.3%						
VR32 I 1		6.4752	1.0813	6.3960			5.31	98.5%						
CR32 J 1		6.6287	1.0750	6.5857			5.51	99.2%						
VR32 K1		6.0090	1.1221	5.9324			4.81	99.4%						
VR32 L1		6.0870	1.0999	5.8111			4.71	94.5%						
VR33 A1		5.6487	1.0842	5.4535			4.37	95.7%						
VR33 B1		6.7026	1.0885	6.5715			5.48	97.7%						
VR33 C1		5.3763	1.0903	5.1571			4.07	94.9%						
VR33 D1		6.6028	1.1121	6.4991			5.39	98.1%						

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(2) 11-12-12 (W)

Analyst: (W)	Date: 11-12-12	Oven ID:	Balance ID: (2) 1123230597
Time in Oven: 18:34	Time Out of Oven: 9:58	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight ≤ 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02 10.12	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		11-12-12 17:24	11-12-12 19:09	11-13-12 [illegible] (1)						
Cal Weight (10.0000):		10.0000 (W)	10.0000 (W)	10.0000 (W)						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	24	~~1.0952~~	1.0952	1.0950						
VR31 I'	25	6.0678	1.1028	2 (1) 5.8541						
I'dup	26	6.0649	1.1166	5.9694						
I'tr	27	6.1533	1.0929	~~5.0~~ (1)	6.0624					
J'	28	6.1942	1.0727	6.1138						
K'	29	6.5827	1.1017	6.4743						
L'	30	6.5713	1.0866	6.4299						
VR32 A'	31	6.3546	1.0866	6.2210						
B'	32	6.3523	1.0839	6.2392						
C'	33	6.8816	1.0895	6.7340						
D'	34	6.7523	1.0915	6.6132						
E'	35	6.0662	1.0804	5.9423						
F'	36	6.7568	1.0869	6.6309						
G'	37	6.3739	1.1179	6.2795						
H'	38	6.1536	1.0917	6.0659						
I'	39	6.4752	1.0813	6.3960						
J'	40	6.6287	1.0750	6.5857						
K'	41	6.0090	1.1221	5.9324						
L'	42	6.0870	1.0999	5.8111						
VR33 A'	43	5.6487	1.0942	5.4535						
B'	44	6.7026	1.0885	6.5715						
C'	45	5.3763	1.0903	5.1571						
D'	46	6.6028	1.1121	6.4991						

Soil Conductivity - pH

meter: Orion Model 115

Date: 10/13/2012

Analyst: KE 10:58

Conductivity Calibration

Potassium Chloride standard *ARI ID =* **N / A**

Conductivity =	**1413**	*µS/cm*
Cal Temp	**N / A**	
Input Value		*µS/cm*

pH Calibration *Temperature (°C)* 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer pH

Source **FISHER#** **7.00**

Conductivity Verification Standard

Source: **N / A**

Record Certified Values

µS / cm = **1000**

TDS (mg/l) =

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			21.5	7.03			*OK@ 100.4%*
VQ56 A1	10	20	20.4	6.33			
VQ56 A1 dup	10	20	20.4	6.36			*pH RPD =0.47%*
VQ56 B1	10	20	20.6	5.88			
VR66 A1	20	20	20.5	5.06			
VR66 B1	20	20	20.2	5.68			
VR66 C1	20	20	20.4	5.51			
VR66 D1	20	20	20.1	5.39			
VR66 E1	20	20	20.2	5.11			
VR66 F1	20	20	20.4	4.37			
VR66 G1	20	20	20.4	5.30			
pH 7 Buffer			21.5	7.04			*OK@ 100.6%*
VR66 H1	20	20	20.2	5.07			
VR66 I 1	20	20	20.3	4.43			
VR66 I 1 dup	20	20	20.3	4.41			*pH RPD =0.45%*
VR66 J 1	20	20	20.2	5.30			
VR02 A3	20	20	20.2	7.55			
VR02 A3 dup	20	20	20.2	7.59			*pH RPD =0.53%*
VR85 A2	20	20	20.3	4.46			
VR85 B2	20	20	20.3	3.35			
VR85 C2	20	20	20.5	3.57			
VR85 D2	20	20	20.5	3.54			
pH 7 Buffer			21.8	7.03			*OK@ 100.4%*
VR85 E2	20	20	20.5	3.78			
VR85 F2	20	20	20.5	3.50			
VR85 G4	20	20	20.6	5.42			
VR85 G4 dup	20	20	20.8	5.45			*pH RPD =0.55%*
VR85 H2	20	20	20.8	5.65			
VR85 I 2	20	20	20.8	5.73			
VR85 J 2	20	20	20.8	5.56			
VR85 K2	20	20	20.7	5.36			
VR85 L2	20	20	20.6	5.74			
VR85 M2	20	20	20.6	6.18			
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR84 A2	20	20	20.6	6.36			
VR84 B2	20	20	20.9	6.46			
VR84 C2	20	20	21.0	5.63			
VR84 D2	20	20	20.9	5.38			
VR84 D2 dup	20	20	20.7	5.34			*pH RPD =0.75%*
VR84 E2	20	20	20.7	4.82			
VR84 F2	20	20	20.8	5.34			

VR84 G2	20	20	20.7	5.56			
VR30 A1	10	20	20.8	5.83			
VR30 A1 dup	10	20	20.8	5.86			*pH RPD =0.51%*
pH 7 Buffer			21.4	7.05			*OK@ 100.7%*
VR30 B1	20	20	20.8	5.91			
VR30 C1	10	20	20.7	5.90			
VR30 D1	10	20	20.8	6.06			
VR30 E1	20	20	20.7	6.06			
VR30 F1	20	20	20.8	6.10			
VR30 G1	20	20	20.8	6.24			
VR30 H1	20	20	20.9	5.84			
VR30 I 1	20	20	21.0	5.87			
VR30 J 1	20	20	20.8	5.56			
VR30 K1	20	20	20.8	5.90			
pH 7 Buffer			21.7	7.05			*OK@ 100.7%*
VR30 L1	20	20	20.8	5.68			
VR31 A1	20	20	20.9	5.69			
VR31 B1	20	20	20.8	5.65			
VR31 C1	20	20	20.7	5.73			
VR31 D1	20	20	20.7	5.60			
VR31 E1	20	20	20.9	5.34			
VR31 F1	20	20	20.8	5.48			
VR31 G1	20	20	20.8	5.94			
VR31 H1	20	20	20.9	6.11			
VR31 I 1	20	20	20.9	5.22			
pH 7 Buffer			21.7	7.04			*OK@ 100.6%*
VR31 J 1	20	20	20.9	5.65			
VR31 K1	20	20	21.0	5.85			
VR31 L1	20	20	21.0	5.80			
VR32 A1	20	20	21.0	6.26			
VR32 A1 dup	20	20	21.0	6.24			*pH RPD =0.32%*
VR32 B1	20	20	21.2	5.27			
VR32 C1	20	20	21.1	5.97			
VR32 D1	20	20	21.0	5.58			
VR32 E1	20	20	21.1	6.26			
VR32 F1	20	20	21.1	5.87			
pH 7 Buffer			21.3	7.02			*OK@ 100.3%*
VR32 G1	20	20	21.1	5.69			
VR32 H1	20	20	21.0	5.80			
VR32 I 1	20	20	20.9	5.91			
VR32 J 1	20	20	20.9	5.89			
VR32 K1	20	20	21.0	6.58			
VR32 L1	10	20	20.9	5.63			
VR85 N1	20	20	20.7	6.74			
pH 7 Buffer			21.6	7.04			*OK@ 100.6%*

(1) 11-13-12 (w)

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (1)

Analyst: (w) 19:58

Conductivity Calibration

Potassium Chloride standard ARI ID = _____

Conductivity =	1413	µS/cm
Cal Temp		
Input Value		µS/cm

pH Calibration Temperature (°C) 21.5

pH Buffers 2, 4, 7, 10, 12

Verification Buffer	pH
Source FISHER#	7.00

Conductivity Verification Standard

Source: _____

Record Certified Values

µS / cm = 1000

TDS (mg/l) = _____

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			21.5	7.03			
UQS6 A1	10	20	20.4	6.37			
↓ nPA1	10	20	20.4	6.36			
↓ B1	10	20	20.6	5.88			
UR66 A1		20.5	~~20.6~~ (1)	5.06			
B1			20.2	5.68			
C1			20.4	5.51			
D1			20.1	5.39			
E1			20.2	5.11			
F1			20.4	4.37			
↓ G1			20.4	5.30			
pH 7 Buffer		21.5	~~7.00~~ (1)	7.04			
UR66 H1			20.2	5.07			
I1			20.3	4.43			
↓ nPI1			20.3	4.41			
↓ J1			20.2	5.30			
UR02 A3			20.2	7.55			
↓ nPA3			20.2	7.59			
UR85 A2			20.3	4.46			
B2			20.3	3.35			
C2			20.5	3.57			
↓ D2			20.5	~~20.5~~	3.54		
pH 7 Buffer		21.8	~~7.00~~ (1)	7.03			
UR85 E2			20.5	3.78			
F2			20.5	3.50			
G2		20.6	~~8.50~~ (1)	~~20.6~~ (2)	5.42		
↓ nPG2			20.8	5.45			
H2			20.8	5.65			
I2			20.8	5.73			
J2			20.8	5.56			
K2			20.7	5.36			
L2			20.6	5.74			
↓ M2			20.6	6.18			
pH 7 Buffer			21.4	7.05			

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-13-12 (W) 10:58

Analyst: (N)

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
VR84 A2			20.6	6.36			
B2			20.9	6.46			
C2			21.0	5.63			
D6			20.9	5.38			
dd D6			20.7	5.34			
E2			20.7	4.82			
F2			20.8	5.34			
↓ G2			20.7	5.56			
VR30 A1	10	20	20.8	5.83			
↓ dd A1	10	20	20.8	5.86			
pH 7 Buffer			21.4	~~7.00~~ (N) 7.05			
VR30 B1			20.8	5.91			
C1	10	20	20.7	5.80			
D1	10	20	20.8	6.06			
E1			20.7	6.06			
F1			20.8	6.10			
G1			20.8	6.24			
H1			20.9	5.84			
I1			21.0	5.87			
J1			20.8	5.56			
↓ K1			20.8	5.90			
pH 7 Buffer			21.7	7.05			
VR30 L1			20.8	2.68			
VR31 A1			20.9	5.69			
B1			20.8	5.65			
C1			20.7	5.73			
D1			20.7	5.60			
E1			20.9	5.34			
F1			20.8	5.48			
G1			20.8	5.94			
↓ H1			20.9	6.11			
↓ I1			20.9	5.22			
pH 7 Buffer			21.7	7.04			
VR31 J1			20.9	5.65			
↓ K1		21.0	~~21.0~~ (N)	5.85			
↓ L1			21.0	5.80			
VR32 A1			21.0	6.26			
dd A1			21.0	6.24			
B1			21.2	5.27			
C1			21.1	5.97			
D1			21.0	5.58			
E1			21.1	6.26			
↓ F1			21.1	5.87			
pH 7 Buffer			21.3	7.02			
VR32 G1			21.1	5.69			
H1			21.0	5.80			
I1			20.9	5.91			
J1			20.9	5.89			
K1			21.0	6.58			
↓ L1	10	20	20.9	5.63			
(2) VR33 A1							
dd A1							
B1				11-13-12 (N)			
↓ C1							
pH 7 Buffer			21.6	7.04			

(2) VR85 N' - 20 - 20 - 20.7 - 6.74 (W) 11-13-12 (N)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca	1205264	2.00	21.6
Analyst:	W		4.00	Fisher	108305	4.00	21.4
			7.00	Ricca	206053	7.01	21.6
			10.00	Fisher	116346	10.05	21.4
			12.00	Ricca	1206157	11.97	21.3
			Verification	Fisher	120143	7.03	21.5

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
W	10:58	ICV	7.03	7.03			21.5
		VQ56A'	6.33	6.33			20.4
		DUP A'	6.35	6.36			20.4
		B'	5.88	5.88			20.6
		VR66A'	5.06	5.06			20.5
		B'	5.67	5.68			20.2
		C'	5.56	5.57			20.4
		D'	5.39	5.39			20.1
		E'	5.11	5.11			20.2
		F'	4.35	4.37			20.4
		G'	5.30	5.30			20.4
		CCV	7.04	7.04			21.5
		VR66H'	5.06	5.07			20.2
		I	4.43	4.43			20.3
		DUP I	4.40	4.41			20.3
		J'	5.30	5.30			20.2
		VRC2A3	7.55	7.55			20.2
		DUP A3	7.58	7.59			20.2
		VR85A2	4.46	4.46			20.3
		B2	3.35	3.35			20.3
		C2	3.57	3.57			20.5
		D2	3.54	3.54			20.5
		CCV	7.04	7.03			21.8

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10.42		2.00	Ricca			
Analyst:	(a)		4.00	Fisher			
			7.00	Ricca		Cont'd	
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
(a)	10:58	~~VR85 fcv~~ E[2]	3.77	3.78			20.5
		F[2]	3.50	3.50			20.5
		G[4]	5.40	5.42			20.6
		nrG[4]	5.45	5.45			20.8
		H[2]	5.65	5.65			20.8
		I[2]	5.75	5.73			20.8
		J[2]	5.56	556			20.8
		K[2]	5.34	536			20.7
		L[2]	5.75	5.74			20.6
		M[2]	6.19	6.18			20.6
			(a)	11-13-12			
		CCV	7.05	7.05			21.4
		VR84A[2]	(1) 6.37	6.36			20.6
		B[2]	6.46	6.46			20.9
		C[2]	5.63	5.63			21.0
		D[6]	5.38	5.38			20.9
		nrD[6]	5.31	5.34			20.7
		E[2]	4.81	4.82			20.7
		F[2]	5.34	5.34			20.8
		G[2]	5.54	556			20.7
		VR30A[2]	5.82	5.83			20.8
		nrA[2] ~~B[2]~~ (1)	5.84	5.86			20.8
		CCV	7.04	7.05			21.4

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(2) 7.05 11-13-12 (W)

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	10-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(W)		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	~~Fisher~~			

cont.

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W)	10:58	~~VR30 ICV~~ B'	5.90	5.91			20.8
		C'	5.91	5.90			20.7
		D'	6.05	6.06			20.8
		E'	6.06	6.06			20.7
		F' ~~(6)~~	6.10	6.10			20.8
		G'	6.24	6.24			20.8
		H'	5.84	5.84			20.9
		I'	5.87	5.87			21.0
		J'	5.57	5.56			20.8
		K'	5.89	5.90			20.8
		CCV'	~~5.66~~ (2)	7.05			~~(1) 20.8~~ 21.7
	VR30	~~VR30~~ (8) CV L'	5.67	5.68			20.8
		VR31 A'	5.69	5.69			20.9
		B'	5.65	5.65			20.8
		C'	5.72	5.73			20.7
		D	5.60	5.60			20.7
		E'	5.34	5.34			20.9
		F'	5.48	5.48			20.8
		G'	5.93	(1) ~~5~~ 5.94			20.8
		H'	6.11	6.11			20.9
		I'	5.22	5.22			20.9
		~~(3)~~ CCV	7.05	7.04			21.7
		VR3 ~~ICV~~ J'	5.68	5.68			20.9

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pH Logbook

Meter ID: Accumet AR60

(1) 11-13-12 (W)

Calibration

Date:	11-13-12		Buffer	Source	Lot #	pH	Temp.
Time:	10:42		2.00	Ricca			
Analyst:	(W)		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

cont

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W) ~~VR31 K1~~	10:58	~~ICV~~ VR31 K1	5.85	5.85			21.0
		L1	5.79	5.80			21.0
		VR32 A	6.26	6.26			21.0
		DUP A	6.25	6.24			21.0
		B'	5.27	5.27			21.2
		C'	5.97	5.97			21.1
		D'	5.59	5.58			21.0
		E'	6.26	6.26			21.1
		F'	5.87	5.87			21.1
		CCV G0	7.01	7.02			21.3
		VR32 H0 G'	5.70	5.69			21.1
		~~CCV~~ 0 H'	6.80	5.80			21.0
		I'	5.89	5.91			20.9
		J'	5.89	5.89			20.9
		K'	6.58	6.58			21.0
		L'	5.63	5.63			20.9
(2)		CCV	7.04	7.04			21.1
		ccv					

11-13-12 (W)

(2) - N - 20 - 20 - 20.7 6.74

11-13-12 (W)

VR32 00514

W

11-27-12

TOC Solids Prep Log

DATE: 11/12/12 (C)

ANALYST: KE / CDE 18:53

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1153		13.1158	0.5 mg	
VR31 I 1		-	13.1737	17.4428	17.6319	104.43%	
VR31 I 1 dup		-	13.1345	17.3369	17.5177	104.30%	RPD = 0.12%
VR31 I 1 trip		-	13.0908	17.6135	17.7876	103.85%	RSD = 0.29%
VR31 J 1		-	13.1292	17.4501	17.6299	104.16%	
VR31 K1		-	13.1564	17.8954	18.0470	103.20%	
VR31 L1		-	13.0951	18.0053	18.1395	102.73%	
VR32 A1		-	13.0688	18.2735	18.3952	102.34%	
VR32 B1		-	13.1717	18.2517	18.3832	102.59%	
VR32 C1		-	13.0896	17.4152	17.5694	103.56%	
VR32 D1		-	13.0916	17.8237	17.9536	102.75%	
VR32 E1		-	13.2227	17.5283	17.6810	103.55%	
VR32 F1		-	13.0734	18.6614	18.7925	102.35%	
VR32 G1		-	13.1945	18.2978	18.4987	103.94%	
VR32 H1		-	13.1680	18.8098	18.9960	103.30%	
VR32 I 1		-	13.1722	17.6422	18.8193	126.33%	
VR32 J 1		-	13.1535	19.0673	19.3083	104.08%	
VR32 K1		-	13.1641	17.8261	17.9852	103.41%	
VR32 L1		-	13.0975	16.6020	16.6963	102.69%	
VR33 A1		-	13.1663	16.0146	16.1164	103.57%	
VR33 B1		-	13.1063	17.1928	17.3254	103.24%	
VR33 C1		-	13.1338	16.5006	16.5988	102.92%	
VR33 D1		-	13.1746	17.5812	17.7203	103.16%	

① 11-12-12 (W)

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) /(C)(MW)(C) Date 11-12-12 18:53

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank		~~(1)~~	13.1153	0	13.1158		
VR31 I'		—	13.1737	17.4428	17.6319		
I'd		—	13.1345	17.3369	17.5177		
I'TP		—	13.0908	17.6135	17.7876		
J'		—	13.1292	17.4501	17.6299		
K'		—	13.1564	17.8954	18.0470		
L'		—	13.0981	18.0053	18.1395		
VR32 A'		—	13.0688	18.2735	18.3952		
B'		—	13.1717	18.2517	18.3832		
C'		—	13.0896	17.4152	17.5694		
D'		—	13.0916	17.8237	17.9536		
E'		—	13.2227	17.5283	17.6810		
F'		—	13.0734	18.6614	18.7925		
G'		—	13.1945	18.2978	18.4987		
H'		—	13.1680	18.8098	18.9960		
I'		—	13.1722	18.6422	~~18.8562~~	18.8193	x
J'		—	13.1535	19.0673	19.3083		
K'		—	13.1641	17.8261	17.9852		
L'		—	13.0975	16.6020	16.6963		
VR33 A'		—	13.1663	16.0146	16.1164		
B'		—	13.1063	17.1928	17.3254		
C'		—	13.1338	16.5006	16.5988		
D'		—	13.1746	17.5812	17.7203		

11-12-12 (R)

W
11-27-12

TOC, Solids Data Analysis

DATE: 11/21/2012
ANALYST: KE 10:18

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 11/13/2012 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00130-01 *Curve Date:* 11/13/12
CalFact: 1.339E+05 *intercept:* 163305 *r2 :* 0.99851
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard Source: *ERA# 0409-12-01* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	1055	1,055	*105.50%*
Blank				1.00		40.0	-9.9	-10	*Blank OK*
NIST 1941B				1.00		2.1	28909	28,909	*96.69%*
VR31 I 1				1.00		0.8	28732	28,732	*Range OK!*
~~VR31 I 1 dup~~				~~1.00~~		~~0.9~~	~~18345~~	~~18,345~~	~~*RPD=44.1%*~~
VR31 I 1 dup				1.00		0.9	26633	26,633	*RPD=7.6%*
VR31 I 1 trp				1.00		0.9	22670	22,670	*RSD=11.8%*
VR31 I 1 ms				1.00	10	0.8	67827	67,827	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.8*	*mg samp=*	*31,250*	*ppm*		*126%*	
VR31 G1				1.00		1.2	13791	13,791	*Range OK!*
VR31 H1				1.00		0.9	24141	24,141	*Range OK!*
VR31 J 1				1.00		1.0	36499	36,499	*Range OK!*
VR31 K1				1.00		0.9	34431	34,431	*Range OK!*
CCV				1.00		40.0	955	955	*95.50%*
Blank				1.00		40.0	-24.92	-25	*Blank OK*
VR31 L1				1.00		0.8	62455	62,455	*Range OK!*
VR32 A1				1.00		1.0	20383	20,383	*Range OK!*
VR32 B1				1.00		0.9	31292	31,292	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Bum wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
VR32 C1				1.00		1.3	16551	16,551	*Range OK!*
VR32 D1				1.00		0.9	18772	18,772	*Range OK!*
VR32 E1				1.00		1.2	22760	22,760	*Range OK!*
VR32 F1				1.00		1.1	23129	23,129	*Range OK!*
VR32 G1				1.00		0.9	22316	22,316	*Range OK!*
VR32 H1				1.00		1.4	16084	16,084	*Range OK!*
VR32 I 1				1.00		1.3	7714	7,714	*Range OK!*
CCV				1.00		40.0	1007	1,007	*100.70%*
Blank				1.00		40.0	-29.71	-30	*Blank OK*
VR32 J 1				1.00		1.4	4861	4,861	*Low Scale*
VR32 K1				1.00		1.1	20658	20,658	*Range OK!*
VR32 L1				1.00		0.8	64168	64,168	*Range OK!*
~~NIST 1941B~~				~~1.00~~		~~1.8~~	~~23737~~	~~23,737~~	~~*79.39%*~~
NIST 1941B				1.00		2.2	27219	27,219	*91.03%*
CCV				1.00		40.0	1054	1,054	*105.40%*
Blank				1.00		40.0	-26.11	-26	*Blank OK*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 11-21-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler		
Standards:	Source		Conc (ppm)		Analyst:	(W)
Calibration:	ARI – U0128-03		5000		Date:	10.18
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS		Time:	11-21-12
SRM:	NBS – (1941b) or 8704		Method: PSEP 1986-MOD		Balance ID	B146454145
Sample Sequence:						

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			2.1			
UR31 I'			0.8			
dI'			0.9			
dI'			0.8			
MI'			0.9			
MSI'			0.8	2500	10	
G'			1.2			
H'			0.9			
J'			1.0			
K'			0.9			
CCV			40			
CCB			40			
UR31 L'			0.8			
UR32 A'			1.0			
B'			0.9			
C'			1.3			
D'			0.9			
E'			1.2			
F'			1.1			
G'			0.9			
H'			1.4			
I'			1.3			
CCV			40			
CCB			40			
UR32 J'			1.4			
K'			1.1			
L'			0.8			
NBS 1941 B			1.8 / 2.2			
CCV			40			
CCB			40			

11-21-12 (W)

Detailed Analysis Report Print Date/Time: 2012/11/21 16:43:45

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11211020
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 10:24
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1055.2404	42.2096	5815052	12.228	13.221	156

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11211027
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 10:29
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-9.8957	-0.3958	110305	11.916	12.915	55

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11211032
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 10:38
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28909.3262	60.7096	8292146	11.667	12.666	221

Sample ID: VR31 I 1 Mode: TOC
Method: Boat Sampler Filename: 11211042
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 10:45
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28731.7188	22.9854	3077676	11.689	12.686	124

Sample ID: VR31 I 1 Mode: TOC
Method: Boat Sampler D Filename: 11211049
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 10:51
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18344.5449	16.5101	2210654	11.488	12.488	117

Sample ID: VR31 I 1 DUP Mode: TOC
Method: Boat Sampler Filename: 11211118
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 11:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26632.8574	21.3063	2852851	11.533	12.530	131

Sample ID: VR31 I 1 ~~DUP~~ Mode: TOC
Method: Boat Sampler Filename: 11211128
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 11:31
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22669.7188	20.4027	2731870	11.854	12.852	126

Sample ID: VR31 I 1 MS
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211135
Timestamp: 2012/11/21 11:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	67827.1016	54.2617	7265485	11.906	12.905	155

Sample ID: VR31 G1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211205
Timestamp: 2012/11/21 12:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13791.1533	16.5494	2215916	11.743	12.743	124

Sample ID: VR31 H1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211211
Timestamp: 2012/11/21 12:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24141.3711	21.7272	2909215	11.726	12.724	128

Sample ID: VR31
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211218
Timestamp: 2012/11/21 12:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36499.1680	36.4992	4887135	11.890	12.887	158

Sample ID: VR31
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211226
Timestamp: 2012/11/21 12:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34430.5547	30.9875	4149138	12.094	13.087	139

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211239
Timestamp: 2012/11/21 12:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	955.3807	38.2152	5280216	12.205	13.203	144

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11211246
Timestamp: 2012/11/21 12:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-24.9204	-0.9968	29835	12.322	12.291	120

Last Message: Low Sample Detected

Sample ID: VR31 L1 Mode: TOC
Method: Boat Sampler Filename: 11211301
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	62455.1719	49.9641	6690056	12.012	13.011	165

Sample ID: VR32 A1 Mode: TOC
Method: Boat Sampler Filename: 11211308
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20383.0293	20.3830	2729230	12.399	13.394	121

Sample ID: VR32 B1 Mode: TOC
Method: Boat Sampler Filename: 11211318
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31292.3750	28.1631	3770964	12.151	13.148	138

Sample ID: VR32 C1 Mode: TOC
Method: Boat Sampler Filename: 11211324
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16550.9199	21.5162	2880957	12.138	13.137	133

Sample ID: VR32 D1 Mode: TOC
Method: Boat Sampler Filename: 11211338
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 13:43
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18772.1562	16.8949	2262185	12.248	13.245	121

Sample ID: VR32 E1 Mode: TOC
Method: Boat Sampler Filename: 11211439
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 14:43
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22760.0742	27.3121	3657011	12.342	13.342	140

Sample ID: VR32 F1 Mode: TOC
Method: Boat Sampler Filename: 11211450
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 14:58
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23129.2285	25.4422	3406632	12.468	13.465	126

Sample ID: VR32 G1 Mode: TOC
Method: Boat Sampler Filename: 11211500
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22315.9551	20.0844	2689239	12.288	13.285	125

Sample ID: VR32 H1 Mode: TOC
Method: Boat Sampler Filename: 11211508
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16083.7568	22.5173	3014997	12.574	13.573	131

Sample ID: VR32 I1 Mode: TOC
Method: Boat Sampler Filename: 11211518
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:21
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7714.3818	10.0287	1342814	12.280	13.278	106

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11211524
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:28
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1007.3592	40.2944	5558606	12.235	13.233	154

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11211540
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:43
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-29.7067	-1.1883	4200	12.328	12.300	120

Last Message: Low Sample Detected

Sample ID: VR32 J 1 Mode: TOC
Method: Boat Sampler Filename: 11211546
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:49
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4861.4844	6.8061	911314	12.177	13.176	86

Sample ID: VR32 K1 Mode: TOC
Method: Boat Sampler Filename: 11211551
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/21 15:55
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20657.8164	22.7236	3042625	12.134	13.133	129

Sample ID: VR32 L1 | Mode: TOC
Method: Boat Sampler | Filename: 11211608
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:13
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	64167.5039	51.3340	6873477	12.390	13.389	162

Sample ID: NBS 1941B | Mode: TOC
Method: Boat Sampler | Filename: 11211619
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:24
Operator ID: TRINA | Sample Type: Cal. Verification

11-21-12

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23736.5566	42.7258	5884169	12.479	13.477	210

Last Message: Out of Calibration

Sample ID: NBS 1941B | Mode: TOC
Method: Boat Sampler | Filename: 11211628
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:33
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27218.5254	59.8808	8181168	12.674	13.672	212

Sample ID: ICV/CCV BOAT | Mode: TOC
Method: Boat Sampler | Filename: 11211635
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:38
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1053.7358	42.1494	5806995	12.503	13.502	153

Sample ID: ICB/CCB BOAT | Mode: TOC
Method: Boat Sampler | Filename: 11211639
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/21 16:42
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-26.1115	-1.0445	23455	12.560	12.527	120

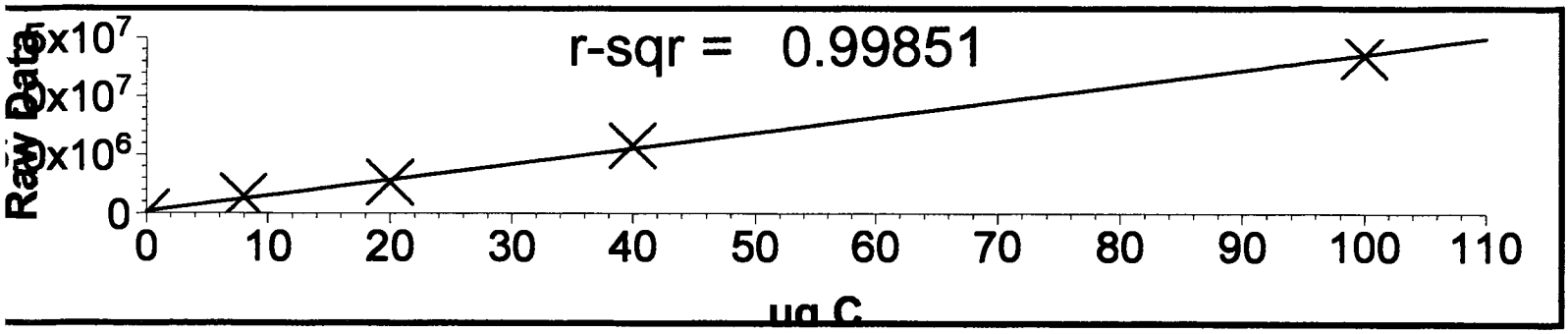
Last Message: Low Sample Detected

11-13-12

Calibration Report Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID: 11132012 BOAT CAL
Created: 2012/11/13 17:59
Calibration Factor (m): 1.339e+05
Y Intercept (b): 163305
r-squared: 0.99851

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46


r-sqr = 0.99851
Raw Data
6x10^7
4x10^7
2x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/11/13 18:00:30

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131156
Timestamp: 2012/11/13 12:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 34152 Std Dev: 13649 RSD: 39.96

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131238
Timestamp: 2012/11/13 13:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

<<<Statistics>>> Mean: 1702454 Std Dev: 978717 RSD: 57.49

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131440
Timestamp: 2012/11/13 15:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

<<<Statistics>>> Mean: 2675582 Std Dev: 260489 RSD: 9.74

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131526
Timestamp: 2012/11/13 15:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

<<<Statistics>>> Mean: 5317643 Std Dev: 38175 RSD: 0.72

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131539
Timestamp: 2012/11/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

<<<Statistics>>> Mean: 1402526 Std Dev: 274468 RSD: 19.57

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131603
Timestamp: 2012/11/13 16:30
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131635
Timestamp: 2012/11/13 16:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131653
Timestamp: 2012/11/13 17:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131715
Timestamp: 2012/11/13 17:46
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR32

ANALYTICAL
RESOURCES
INCORPORATED

ANALYST NOTES - GeoTech

ARI Job No: VR32 Client Name: Hart Crowser, Inc.

Project ~~Parameter:~~ Upper Columbia Parameter ~~Client Project:~~ #10 screen

☐ Job OK, no corrective action required

Set up Date: 11/8/12

Air Dry Start: 15:50 11/8/12

Sieve Date: 11/12/12

Analyst: gc Date Completed: 11/12/12

12000F

Version 01
07/09/03

VR32 · 00539

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Total Solids			
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AV
Signature

November-28-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

November 28, 2012

Steve Hughes
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Upper Columbia 17800-36
ARI Job No. VR33

Dear Steve:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: eFile VR33

KFB/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VR33

VR33 4 of 9

Sample Custody Record

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 17800-36 LAB NUMBER

PROJECT NAME UPPER COLUMBIA

HART CROWSER CONTACT STEVE HUGHES

SAMPLED BY: PRC, SMF, WDM, KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: METALS*	TOC	pH (EPA 9045)	TOTAL SOLIDS (SM 2540B)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	SA3-7C		11/1/12	1254	SOIL	X	X	X	X	1	
	SA3-8C			1202						1	
	SA3-Field Duplicate			1314						1	
	SA4-1C		11/2/12	0855						1	
	SA4-1P-1	(0 to 3" depth)		0940						1	
	SA4-1P-2	(3 to 6" depth)		0945						1	
	SA4-1P-3	(6 to 12" depth)		0950						1	
	SA4-1P-4	(12 to 24" depth)		0955						1	
	SA4-2C		11/1/12	1000						1	
	SA4-3C		11/2/12	1030						1	
	SA4-4C		11/1/12	1112						1	
	SA4-5C		11/1/12	1524						1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Suzanne Fanbl	11/7/12	SIGNATURE: Chris Atwell	11-7-12
PRINT NAME: Suzanne Fanbl	TIME	PRINT NAME: Chris Atwell	TIME
COMPANY: Hart Crowser	0800	COMPANY: ARI	1130
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
* METALS - Ag, Al, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, Pb, K, Na, Sb, Se, Tl, V, Zn, (METHOD 6010B/6020) Hg BY EPA 7471A

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

12 TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE _____
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☒ STANDARD
☐ 72 HOURS OTHER _____

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser

Project Name: Upper Columbia

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VR33

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? (YES) NO

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 2.9 4.7 5.1 3.8 ~~NR~~

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: CA Date: 11-07-12 Time: 1130

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? (YES) NO

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI: (NA) _____

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

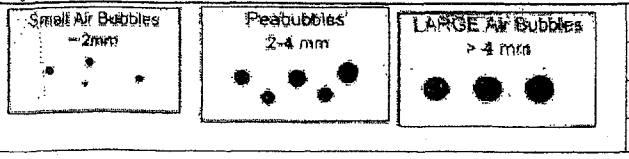
Samples Logged by: SM Date: 11/7/12 Time: 1325

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR33

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR33
November 28, 2012

Sample Receipt:

Please find enclosed the original chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted twelve soil samples in good condition on November 7, 2012. The samples were received with cooler temperatures between 2.9 and 5.1°C. Please see the Cooler Receipt Form for further details.

Total Metals by 200.8, 6010C and 7471A

The samples were digested on 11/14/12 and analyzed between 11/15/12 and 11/19/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): The percent differences (%Ds) for several elements were not within control limits for the CCAL that bracketed the 11/16/12 ICP analyses of these samples. This CCAL was immediately re-analyzed. The %Ds for all elements were within acceptable QC limits. No further corrective actions were taken. All other analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): The method blank was free of contamination.

LCS: Is in control.

Matrix spike/Sample Duplicate/RPD: The percent recoveries for aluminum, antimony, iron, magnesium, manganese, mercury and zinc were not within control limits for the matrix spike associated with sample SA3-7C. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that the sample matrix was the cause of the poor MS recoveries. No corrective actions were taken.

The RPD for nickel was not within control limits for the matrix duplicate associated with sample SA3-7C. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that a lack of sample homogeneity was the cause of the high RPD. No corrective actions were taken.

Conventional Chemistry Parameters

The samples were analyzed between 11/12/12 and 11/26/12 within the method recommended holding times.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: There were no anomalies with these samples.

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR33
November 28, 2012

Method Blank(s): The method blanks were free of contamination.

SRM/ LCS/ Sample Replicates: All percent recoveries and RPDs were in control.

Matrix spike: Is in control.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Hart Crowser, Inc.	**ARI Job No.:** VR33
Client Project: Upper Columbia	**Client Project No.:** 17800-36

Case Narrative

1. Twelve samples were received on November 7, 2012, and were in good condition.
2. The samples were submitted for separation of the less than 2mm material.
3. The samples were each placed in a clean tare and air-dried.
4. The samples were separated into two size fractions using a decontaminated, stainless steel #10 (2mm) sieve and sieve pan.
5. After separation, both size fractions were delivered to sample receiving for distribution.
6. There were no further anomalies in the samples or test method.

Released by: Gunnar Curtis Date: 11/12/12
Title: *Geotechnical Division Manager*

Reviewed by: Date: 11-14-2012
Title: *Lead Technician*

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR33
Client: Hart Crowser Inc.
Project Event: 17800-36
Project Name: Upper Columbia

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SA3-7C	VR33A	12-22201	Soil	11/01/12 12:54	11/07/12 11:30
2.	SA3-8C	VR33B	12-22202	Soil	11/01/12 12:02	11/07/12 11:30
3.	SA3-Field Duplicate	VR33C	12-22203	Soil	11/01/12 13:14	11/07/12 11:30
4.	SA4-1C	VR33D	12-22204	Soil	11/02/12 08:55	11/07/12 11:30
5.	SA4-1P-1(0 to 3" depth)	VR33E	12-22205	Soil	11/02/12 09:40	11/07/12 11:30
6.	SA4-1P-2(3 to 6" depth)	VR33F	12-22206	Soil	11/02/12 09:45	11/07/12 11:30
7.	SA4-1P-3(6 to 12" depth)	VR33G	12-22207	Soil	11/02/12 09:50	11/07/12 11:30
8.	SA4-1P-4(12 to 24" depth	VR33H	12-22208	Soil	11/02/12 09:55	11/07/12 11:30
9.	SA4-2C	VR33I	12-22209	Soil	11/01/12 10:00	11/07/12 11:30
10.	SA4-3C	VR33J	12-22210	Soil	11/02/12 10:30	11/07/12 11:30
11.	SA4-4C	VR33K	12-22211	Soil	11/01/12 11:12	11/07/12 11:30
12.	SA4-5C	VR33L	12-22212	Soil	11/01/12 15:24	11/07/12 11:30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A

Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[4]	Solids[3]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[5]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[5]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VR33

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SA3-7C	VR33A	12-22201	
SA3-7CD	VR33ADUP	12-22201	
SA3-7CS	VR33ASPK	12-22201	
SA3-8C	VR33B	12-22202	
PBS	VR33MB1	12-22202	
LCSS	VR33MB1SPK	12-22202	
SA3-Field Duplicat	VR33C	12-22203	
SA4-1C	VR33D	12-22204	
SA4-1P-1(0 to 3	VR33E	12-22205	
SA4-1P-2(3 to 6	VR33F	12-22206	
SA4-1P-3(6 to 12	VR33G	12-22207	
SA4-1P-4(12 to 24	VR33H	12-22208	
SA4-2C	VR33I	12-22209	
SA4-3C	VR33J	12-22210	
SA4-4C	VR33K	12-22211	
SA4-5C	VR33L	12-22212	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 4/27/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA3-7C
SAMPLE

Lab Sample ID: VR33A
LIMS ID: 12-22201
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 95.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.9	10	**14,700**	
3050B	11/14/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.6**	
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**14.2**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**301**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**7.7**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**7,960**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**20.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**6.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**28.7**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**18,000**	
3050B	11/14/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**430**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**4,570**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**1,090**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.106**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**21.7**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**1,810**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0082	0.2	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**170**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**18.3**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**390**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: SA3-8C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VR33B
LIMS ID: 12-22202
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.8	10	**14,600**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**7.9**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**313**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.4**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**3.6**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**4,970**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**14.6**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**5.0**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**13.8**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**16,600**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**199**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**3,820**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.099	0.2	**902**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.051**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**11.9**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**1,450**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**180**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.2**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**17.5**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**233**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA3-Field Duplicate
SAMPLE

Lab Sample ID: VR33C
LIMS ID: 12-22203
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 94.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**22,100**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**17.3**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**827**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.019	0.2	**0.9**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**6.8**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**15,200**	
3050B	11/14/12	200.8	11/19/12	**7440-47-3**	**Chromium**	0.20	3	**110**	
3050B	11/14/12	200.8	11/19/12	**7440-48-4**	**Cobalt**	0.16	1	**23**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**43.6**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**39,100**	
3050B	11/14/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**348**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**13,800**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**1,850**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.126**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**95.3**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**4,730**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0082	0.2	**0.3**	
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	2.7	130	130	U
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.5**	
3050B	11/14/12	200.8	11/19/12	**7440-62-2**	**Vanadium**	0.087	1	**39**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**470**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-1C
SAMPLE

Lab Sample ID: VR33D
LIMS ID: 12-22204
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.6	10	**16,600**	
3050B	11/14/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.012	0.2	**0.2**	
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.083	0.2	**14.3**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**290**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.011	0.09	**5.44**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**5,650**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**27.5**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.030	0.2	**9.6**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.034	0.5	**25.3**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**22,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.09	**213**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**5,120**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.097	0.2	**870**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.057**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**21.2**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**2,790**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.094	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0076	0.2	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**130**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0028	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**28.6**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.32	4	**281**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-1P-1(0 to 3" depth)
SAMPLE

Lab Sample ID: VR33E
LIMS ID: 12-22205
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.4	10	**15,600**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**18.2**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**301**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**6.6**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.5	10	**5,490**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**28.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**10.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**28.7**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**25,700**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**268**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**5,670**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.095	0.2	**1,010**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.068**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**23.9**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	41	120	**2,930**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0078	0.2	**0.2**	
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	2.5	120	120	U
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**29.7**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**320**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-1P-2(3 to 6" depth)
SAMPLE

Lab Sample ID: VR33F
LIMS ID: 12-22206
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.6	10	**17,000**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**11.2**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**302**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.2**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**4,740**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**27.3**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**10.5**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**25.7**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**26,600**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**103**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**5,650**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.097	0.2	**958**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.035**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**23.5**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**2,850**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**130**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**27.8**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**146**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-1P-3(6 to 12" depth)
SAMPLE

Lab Sample ID: VR33G
LIMS ID: 12-22207
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 98.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.3	10	**20,600**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**5.5**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**193**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.7**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.4	10	**3,150**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**26.4**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.0**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**22.5**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.7	10	**25,600**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**13.8**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.2	10	**5,690**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.093	0.2	**569**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.012**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**21.8**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	41	120	**2,380**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.5	120	**150**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**31.6**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**56**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-1P-4(12 to 24" depth)
SAMPLE

Lab Sample ID: VR33H
LIMS ID: 12-22208
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 98.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.6	10	**17,000**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**4.5**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**182**	
3050B	11/14/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**3,500**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**24.4**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**7.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**15.3**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**23,600**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**9.3**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**5,520**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.097	0.2	**433**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.009**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**17.2**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**2,280**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**160**	
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**27.8**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**38**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-2C
SAMPLE

Lab Sample ID: VR33I
LIMS ID: 12-22209
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.9	10	**14,700**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.012	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.083	0.2	**9.1**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**168**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.011	0.1	**3.4**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**7,470**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**21.9**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.030	0.2	**7.6**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.034	0.5	**22.1**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**21,800**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**135**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**5,440**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**574**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.049**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**15.3**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**3,520**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.094	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0076	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**160**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.2**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**32.9**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.32	4	**186**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-3C
SAMPLE

Lab Sample ID: VR33J
LIMS ID: 12-22210
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 98.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.5	10	**15,000**	
3050B	11/14/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**20.2**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**135**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**9.0**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.5	10	**4,420**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**28.9**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**9.7**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**36.0**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**23,900**	
3050B	11/14/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.23	0.5	**398**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**7,580**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.096	0.2	**654**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.080**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**17.0**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**2,830**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0078	0.2	**0.2**	
3050B	11/14/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.5	120	**150**	
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.4**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**43.1**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**370**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-4C
SAMPLE

Lab Sample ID: VR33K
LIMS ID: 12-22211
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 96.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**14,300**	
3050B	11/14/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.2**	
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.085	0.2	**11.8**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**215**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**5.6**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**7,740**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**28.0**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**8.3**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**27.1**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**19,800**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.046	0.1	**224**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**4,830**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**831**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.073**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**19.3**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**2,870**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.097	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0078	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	2.7	130	130	U
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.3**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**28.6**	
3050B	11/14/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**320**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-5C
SAMPLE

Lab Sample ID: VR33L
LIMS ID: 12-22212
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**17,300**	
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**11.9**	
3050B	11/14/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**175**	
3050B	11/14/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.7**	
3050B	11/14/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**2.7**	
3050B	11/14/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**4,980**	
3050B	11/14/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**20.7**	
3050B	11/14/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**9.3**	
3050B	11/14/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**23.5**	
3050B	11/14/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**21,500**	
3050B	11/14/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**109**	
3050B	11/14/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**4,370**	
3050B	11/14/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**842**	
CLP	11/14/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.039**	
3050B	11/14/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**21.7**	
3050B	11/14/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**2,760**	
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	2.7	130	130	U
3050B	11/14/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.2**	
3050B	11/14/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**26.4**	
3050B	11/14/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**192**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA3-7C
MATRIX SPIKE

Lab Sample ID: VR33A
LIMS ID: 12-22201
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Aluminum	6010C	14,700	15,200	201	249%	H
Antimony	200.8	0.6	2.2	25.5	6.3%	N
Arsenic	200.8	14.2	42.0	25.5	109%	
Barium	6010C	301	509	201	103%	
Beryllium	200.8	0.5	30.7	25.5	118%	
Cadmium	200.8	7.7	34.0	25.5	103%	
Calcium	6010C	7,960	9,120	1,000	116%	H
Chromium	200.8	20.3	43.4	25.5	90.6%	
Cobalt	200.8	6.7	32.5	25.5	101%	
Copper	200.8	28.7	57.0	25.5	111%	
Iron	6010C	18,000	18,100	201	49.8%	H
Lead	200.8	430	450	25.5	78.4%	H
Magnesium	6010C	4,570	6,190	1,000	162%	H
Manganese	6010C	1,090	1,120	50.2	59.8%	H
Mercury	7471A	0.106	0.161	0.0749	73.4%	N
Nickel	200.8	21.7	44.9	25.5	91.0%	
Potassium	6010C	1,810	2,780	1,000	97.0%	
Selenium	200.8	0.5 U	82.7	81.6	101%	
Silver	200.8	0.2	20.0	25.5	77.6%	
Sodium	6010C	170	1,180	1,000	101%	
Thallium	200.8	0.3	26.6	25.5	103%	
Vanadium	200.8	18.3	45.0	25.5	105%	
Zinc	200.8	390	440	81.6	61.3%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA3-7C
DUPLICATE

Lab Sample ID: VR33A
LIMS ID: 12-22201
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Aluminum	6010C	14,700	15,000	2.0%	+/- 20%	
Antimony	200.8	0.6	0.6	0.0%	+/- 0.2	L
Arsenic	200.8	14.2	14.5	2.1%	+/- 20%	
Barium	6010C	301	297	1.3%	+/- 20%	
Beryllium	200.8	0.5	0.5	0.0%	+/- 0.2	L
Cadmium	200.8	7.7	7.6	1.3%	+/- 20%	
Calcium	6010C	7,960	7,950	0.1%	+/- 20%	
Chromium	200.8	20.3	16.9	18.3%	+/- 20%	
Cobalt	200.8	6.7	6.3	6.2%	+/- 20%	
Copper	200.8	28.7	28.5	0.7%	+/- 20%	
Iron	6010C	18,000	18,200	1.1%	+/- 20%	
Lead	200.8	430	412	4.3%	+/- 20%	
Magnesium	6010C	4,570	4,700	2.8%	+/- 20%	
Manganese	6010C	1,090	1,080	0.9%	+/- 20%	
Mercury	7471A	0.106	0.103	2.9%	+/- 20%	
Nickel	200.8	21.7	17.3	22.6%	+/- 20%	*
Potassium	6010C	1,810	1,760	2.8%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.2	0.2	0.0%	+/- 0.2	L
Sodium	6010C	170	170	0.0%	+/- 130	L
Thallium	200.8	0.3	0.3	0.0%	+/- 0.2	L
Vanadium	200.8	18.3	16.9	8.0%	+/- 20%	
Zinc	200.8	390	370	5.3%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR33LCS
LIMS ID: 12-22202
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	217	200	108%	
Antimony	200.8	24.8	25.0	99.2%	
Arsenic	200.8	24.8	25.0	99.2%	
Barium	6010C	218	200	109%	
Beryllium	200.8	25.2	25.0	101%	
Cadmium	200.8	25.0	25.0	100%	
Calcium	6010C	1040	1000	104%	
Chromium	200.8	25.6	25.0	102%	
Cobalt	200.8	25.9	25.0	104%	
Copper	200.8	26.1	25.0	104%	
Iron	6010C	222	200	111%	
Lead	200.8	27.0	25.0	108%	
Magnesium	6010C	1090	1000	109%	
Manganese	6010C	55.1	50.0	110%	
Mercury	7471A	0.131	0.143	91.6%	
Nickel	200.8	25.6	25.0	102%	
Potassium	6010C	1050	1000	105%	
Selenium	200.8	79.9	80.0	99.9%	
Silver	200.8	25.4	25.0	102%	
Sodium	6010C	1010	1000	101%	
Thallium	200.8	27.3	25.0	109%	
Vanadium	200.8	25.4	25.0	102%	
Zinc	200.8	83	80	104%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VR33MB
LIMS ID: 12-22202
Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

QC Report No: VR33-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/14/12	6010C	11/16/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/14/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/14/12	200.8	11/16/12	7440-41-7	Beryllium	0.018	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	11/14/12	6010C	11/16/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/14/12	200.8	11/15/12	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	11/14/12	200.8	11/15/12	7440-48-4	Cobalt	0.032	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-50-8	Copper	0.036	0.5	0.5	U
3050B	11/14/12	6010C	11/16/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/14/12	200.8	11/15/12	7439-92-1	Lead	0.047	0.1	0.1	U
3050B	11/14/12	6010C	11/16/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/14/12	6010C	11/16/12	7439-96-5	Manganese	0.040	0.1	0.1	U
CLP	11/14/12	7471A	11/17/12	7439-97-6	Mercury	0.0004	0.007	0.007	U
3050B	11/14/12	200.8	11/15/12	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	11/14/12	6010C	11/16/12	7440-09-7	Potassium	17	50	50	U
3050B	11/14/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/14/12	200.8	11/19/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/14/12	6010C	11/16/12	7440-23-5	Sodium	1.1	50	50	U
3050B	11/14/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-62-2	Vanadium	0.017	0.2	0.2	U
3050B	11/14/12	200.8	11/15/12	7440-66-6	Zinc	0.34	4	4	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111671	2000.0	1993.69	**99.7**	2000.0	2097.56	**104.9**	2041.11	**102.1**	2092.74	**104.6**	2083.91	**104.2**	2185.74	**109.3**
Antimony	SB	PMS	MS111511	50.0	49.58	**99.2**	50.0	50.25	**100.5**	50.82	**101.6**	50.96	**101.9**	50.90	**101.8**	49.85	**99.7**
Arsenic	AS	PMS	MS111511	50.0	49.14	**98.3**	50.0	49.58	**99.2**	48.12	**96.2**	49.70	**99.4**	48.61	**97.2**	48.76	**97.5**
Barium	BA	ICP	IP111671	1000.0	1018.64	**101.9**	1000.0	1041.05	**104.1**	1040.26	**104.0**	1080.46	**108.0**	1068.00	**106.8**	1118.68	**111.9**
Beryllium	BE	PMS	MS111511	50.0	52.03	**104.1**	50.0	51.64	**103.3**	52.18	**104.4**	50.94	**101.9**	54.65	**109.3**	54.51	**109.0**
Cadmium	CD	PMS	MS111511	50.0	49.59	**99.2**	50.0	50.91	**101.8**	51.07	**102.1**	50.40	**100.8**	51.00	**102.0**	50.23	**100.5**
Calcium	CA	ICP	IP111671	2000.0	1908.96	**95.4**	2000.0	1978.86	**98.9**	1948.46	**97.4**	2125.08	**106.3**	2028.08	**101.4**	2094.76	**104.7**
Chromium	CR	PMS	MS111511	50.0	49.15	**98.3**	50.0	50.26	**100.5**	49.93	**99.9**	50.58	**101.2**	50.52	**101.0**	49.49	**99.0**
Cobalt	CO	PMS	MS111511	50.0	50.76	**101.5**	50.0	51.79	**103.6**	50.52	**101.0**	51.00	**102.0**	51.84	**103.7**	50.64	**101.3**
Copper	CU	PMS	MS111511	50.0	49.41	**98.8**	50.0	51.23	**102.5**	49.01	**98.0**	50.66	**101.3**	49.43	**98.9**	48.84	**97.7**
Iron	FE	ICP	IP111671	2000.0	2000.63	**100.0**	2000.0	2124.56	**106.2**	2043.91	**102.2**	2138.97	**106.9**	2128.52	**106.4**	2212.97	**110.6**
Lead	PB	PMS	MS111511	50.0	51.24	**102.5**	50.0	51.29	**102.6**	50.89	**101.8**	51.46	**102.9**	51.50	**103.0**	50.98	**102.0**
Magnesium	MG	ICP	IP111671	2000.0	1991.52	**99.6**	2000.0	2083.31	**104.2**	2041.91	**102.1**	2105.19	**105.3**	2112.69	**105.6**	2201.40	**110.1**
Manganese	MN	ICP	IP111671	1000.0	983.41	**98.3**	1000.0	987.07	**98.7**	986.80	**98.7**	1060.71	**106.1**	1007.27	**100.7**	1063.89	**106.4**
Mercury	HG	CVA	HG111701	8.0	7.26	**90.8**	4.0	3.69	**92.3**	3.65	**91.3**	1.76	**44.0**	3.63	**90.8**	3.59	**89.8**
Nickel	NI	PMS	MS111511	50.0	49.09	**98.2**	50.0	50.47	**100.9**	48.27	**96.5**	49.43	**98.9**	48.80	**97.6**	48.90	**97.8**
Potassium	K	ICP	IP111671	20000.0	19701.02	**98.5**	20000.0	19744.17	**98.7**	19949.30	**99.7**	20493.51	**102.5**	20090.12	**100.5**	21426.69	**107.1**
Selenium	SE	PMS	MS111511	80.0	76.84	**96.1**	50.0	49.83	**99.7**	48.32	**96.6**	50.16	**100.3**	49.16	**98.3**	49.29	**98.6**
Sodium	NA	ICP	IP111671	50000.0	48621.30	**97.2**	50000.0	48657.79	**97.3**	49021.38	**98.0**	52938.44	**105.9**	49020.90	**98.0**	55265.39	**110.5**
Thallium	TL	PMS	MS111511	50.0	52.26	**104.5**	50.0	51.73	**103.5**	51.44	**102.9**	52.64	**105.3**	52.48	**105.0**	51.65	**103.3**
Vanadium	V	PMS	MS111511	50.0	50.37	**100.7**	50.0	49.83	**99.7**	48.87	**97.7**	49.80	**99.6**	50.19	**100.4**	49.71	**99.4**
Zinc	ZN	PMS	MS111511	50.0	49.08	**98.2**	50.0	49.71	**99.4**	49.06	**98.1**	50.87	**101.7**	49.72	**99.4**	47.97	**95.9**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS:ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111671	2000.0	1980.55	99.0	2035.55	101.8	2002.34	100.1	1987.45	99.4	2244.71	112.2	2102.98	105.1
Antimony	SB	PMS	MS111511	50.0	50.55	101.1	50.81	101.6	50.31	100.6	50.32	100.6	49.65	99.3	50.37	100.7
Arsenic	AS	PMS	MS111511	50.0	48.54	97.1	49.34	98.7	49.93	99.9	48.70	97.4	49.21	98.4	49.47	98.9
Barium	BA	ICP	IP111671	1000.0	1018.16	101.8	1037.75	103.8	1022.89	102.3	1020.34	102.0	1130.51	113.1	1057.49	105.7
Beryllium	BE	PMS	MS111511	50.0	55.41	110.8	55.33	110.7	55.02	110.0	54.75	109.5	54.71	109.4	55.58	111.2
Cadmium	CD	PMS	MS111511	50.0	50.81	101.6	50.92	101.8	50.81	101.6	49.82	99.6	50.05	100.1	50.69	101.4
Calcium	CA	ICP	IP111671	2000.0	1907.62	95.4	1959.62	98.0	1936.46	96.8	2048.24	102.4	2154.74	107.7	2131.88	106.6
Chromium	CR	PMS	MS111511	50.0	49.57	99.1	50.24	100.5	49.57	99.1	48.95	97.9	50.41	100.8	50.65	101.3
Cobalt	CO	PMS	MS111511	50.0	50.73	101.5	51.17	102.3	50.32	100.6	48.84	97.7	50.36	100.7	51.26	102.5
Copper	CU	PMS	MS111511	50.0	48.37	96.7	48.86	97.7	49.61	99.2	48.98	98.0	49.84	99.7	48.72	97.4
Iron	FE	ICP	IP111671	2000.0	2009.14	100.5	2071.54	103.6	2046.63	102.3	2061.01	103.1	2315.18	115.8	2158.58	107.9
Lead	PB	PMS	MS111511	50.0	51.44	102.9	51.22	102.4	50.71	101.4	50.18	100.4	50.15	100.3	50.65	101.3
Magnesium	MG	ICP	IP111671	2000.0	1999.38	100.0	2041.66	102.1	2017.65	100.9	2026.59	101.3	2260.38	113.0	2096.46	104.8
Manganese	MN	ICP	IP111671	1000.0	973.42	97.3	999.24	99.9	992.47	99.2	1036.56	103.7	1111.99	111.2	1087.14	108.7
Mercury	HG	CVA	HG111701	4.0	3.60	90.0	3.64	91.0	3.61	90.3	3.56	89.0	3.71	92.8	3.72	93.0
Nickel	NI	PMS	MS111511	50.0	48.10	96.2	49.26	98.5	48.91	97.8	47.68	95.4	48.59	97.2	48.19	96.4
Potassium	K	ICP	IP111671	20000.0	19593.93	98.0	19999.47	100.0	19787.78	98.9	20078.23	100.4	22083.81	110.4	21179.23	105.9
Selenium	SE	PMS	MS111511	50.0	49.24	98.5	49.76	99.5	50.69	101.4	49.16	98.3	49.78	99.6	50.22	100.4
Sodium	NA	ICP	IP111671	50000.0	48047.26	96.1	49204.60	98.4	48688.87	97.4	49285.03	98.6	57240.94	114.5	53444.28	106.9
Thallium	TL	PMS	MS111511	50.0	52.17	104.3	52.64	105.3	51.59	103.2	51.08	102.2	51.26	102.5	51.46	102.9
Vanadium	V	PMS	MS111511	50.0	50.17	100.3	50.76	101.5	49.17	98.3	49.12	98.2	50.82	101.6	49.82	99.6
Zinc	ZN	PMS	MS111511	50.0	48.94	97.9	50.16	100.3	50.38	100.8	48.98	98.0	49.80	99.6	49.30	98.6

VR33 : 09921

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR33

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Aluminum	AL	ICP	IP111671	2000.0	2025.62	**101.3**	2020.30	**101.0**								
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111671	1000.0	1017.02	**101.7**	1004.89	**100.5**								
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111671	2000.0	1944.48	**97.2**	2049.88	**102.5**								
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111671	2000.0	2089.18	**104.5**	2110.67	**105.5**								
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111671	2000.0	2024.98	**101.2**	2015.84	**100.8**								
Manganese	MN	ICP	IP111671	1000.0	1005.91	**100.6**	1028.80	**102.9**								
Mercury	HG	CVA	HG111701	4.0	3.66	**91.5**	3.61	**90.3**	3.55	**88.8**	3.45	**86.3**	3.54	**88.5**	3.46	**86.5**
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111671	20000.0	19956.13	**99.8**	19711.86	**98.6**								
Selenium	SE	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111671	50000.0	48978.47	**98.0**	48093.20	**96.2**								
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR33

ANALYTE	EL	M	RUN	CCVTV	CCV18	%R	CCV19	%R	CCV20	%R	CCV21	%R	CCV22	%R	CCV23	%R
Aluminum	AL	ICP	IP111671	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111671	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111671	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111671	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111671	2000.0												
Manganese	MN	ICP	IP111671	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.65	**91.3**	3.69	**92.3**	3.61	**90.3**	3.61	**90.3**				
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111671	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111671	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

VR33 : 09035

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR33

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Beryllium	BE	PMS	MS111611	50.0	49.89	**99.8**	50.0	50.03	**100.1**	50.41	**100.8**	50.48	**101.0**	52.74	**105.5**	51.80	**103.6**
Lead	PB	PMS	MS111611	50.0	50.17	**100.3**	50.0	49.41	**98.8**	49.78	**99.6**	49.17	**98.3**	49.98	**100.0**	49.71	**99.4**
Zinc	ZN	PMS	MS111611	50.0	50.78	**101.6**	50.0	50.45	**100.9**	50.27	**100.5**	49.95	**99.9**	49.45	**98.9**	50.88	**101.8**

VR33 : 9937

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR33

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Beryllium	BE	PMS	MS111611	50.0	53.27	**106.5**	52.92	**105.8**								
Lead	PB	PMS	MS111611	50.0	48.66	**97.3**	49.77	**99.5**								
Zinc	ZN	PMS	MS111611	50.0	50.42	**100.8**	50.00	**100.0**								

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Chromium	CR	PMS	MS111911	50.0	51.49	**103.0**	50.0	50.49	**101.0**	50.58	**101.2**	49.72	**99.4**	50.40	**100.8**	51.53	**103.1**
Cobalt	CO	PMS	MS111911	50.0	50.78	**101.6**	50.0	50.10	**100.2**	49.70	**99.4**	50.57	**101.1**	49.34	**98.7**	49.55	**99.1**
Silver	AG	PMS	MS111911	50.0	51.46	**102.9**	50.0	48.46	**96.9**	47.74	**95.5**	48.96	**97.9**	49.20	**98.4**	49.31	**98.6**
Vanadium	V	PMS	MS111911	50.0	51.44	**102.9**	50.0	49.50	**99.0**	49.93	**99.9**	49.04	**98.1**	49.83	**99.7**	50.63	**101.3**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS:ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Chromium	CR	PMS	MS111911	50.0	49.65	**99.3**										
Cobalt	CO	PMS	MS111911	50.0	48.70	**97.4**										
Silver	AG	PMS	MS111911	50.0	48.92	**97.8**										
Vanadium	V	PMS	MS111911	50.0	49.71	**99.4**										

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR33

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Aluminum	AL	ICP	IP111671	50.0	60.56	**121.1**	59.46	**118.9**	60.85	**121.7**						
Antimony	SB	PMS	MS111511	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS111511	0.2	0.19	**95.0**										
Barium	BA	ICP	IP111671	3.0	2.28	**76.0**	2.93	**97.7**	2.29	**76.3**						
Beryllium	BE	PMS	MS111511	0.2	0.22	**110.0**										
Cadmium	CD	PMS	MS111511	0.1	0.12	**120.0**										
Calcium	CA	ICP	IP111671	50.0	47.91	**95.8**	50.54	**101.1**	51.28	**102.6**						
Chromium	CR	PMS	MS111511	0.5	0.61	**122.0**										
Cobalt	CO	PMS	MS111511	0.2	0.21	**105.0**										
Copper	CU	PMS	MS111511	0.5	0.54	**108.0**										
Iron	FE	ICP	IP111671	50.0	53.99	**108.0**	57.63	**115.3**	62.83	**125.7**						
Lead	PB	PMS	MS111511	0.1	0.12	**120.0**										
Magnesium	MG	ICP	IP111671	50.0	54.79	**109.6**	58.12	**116.2**	51.93	**103.9**						
Manganese	MN	ICP	IP111671	1.0	0.86	**86.0**	1.06	**106.0**	0.92	**92.0**						
Mercury	HG	CVA	HG111701	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS111511	0.5	0.52	**104.0**										
Potassium	K	ICP	IP111671	500.0	501.15	**100.2**	506.23	**101.2**	498.77	**99.8**						
Selenium	SE	PMS	MS111511	0.5	0.58	**116.0**										
Sodium	NA	ICP	IP111671	500.0	471.16	**94.2**	475.77	**95.2**	466.00	**93.2**						
Thallium	TL	PMS	MS111511	0.2	0.22	**110.0**										
Vanadium	V	PMS	MS111511	0.2	0.23	**115.0**										
Zinc	ZN	PMS	MS111511	4.0	4.42	**110.5**										
Beryllium	BE	PMS	MS111611	0.2	0.20	**100.0**										
Lead	PB	PMS	MS111611	0.1	0.11	**110.0**										
Zinc	ZN	PMS	MS111611	4.0	4.32	**108.0**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Chromium	CR	PMS	MS111911	0.5	0.58	**116.0**										
Cobalt	CO	PMS	MS111911	0.2	0.21	**105.0**										
Silver	AG	PMS	MS111911	0.2	0.21	**105.0**										
Vanadium	V	PMS	MS111911	0.2	0.24	**120.0**										

VR33 - 050912

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U								
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U								
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U								
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U								
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U								
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U								
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U								
Selenium	SE	PMS	MS111511	5.0	0.5												
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U								
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB18	C	CCB19	C	CCB20	C	CCB21	C	CCB22	C	CCB23	C
Aluminum	AL	ICP	IP111671	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111671	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111671	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111671	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111671	5000.0	50.0												
Manganese	MN	ICP	IP111671	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U						
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111671	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Sodium	NA	ICP	IP111671	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U								
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U	0.1	U								
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U	4.0	U								

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Chromium	CR	PMS	MS111911	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111911	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Silver	AG	PMS	MS111911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111911	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

VR33 : 000149

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Chromium	CR	PMS	MS111911	10.0	0.5	0.5	U										
Cobalt	CO	PMS	MS111911	50.0	0.2	0.2	U										
Silver	AG	PMS	MS111911	10.0	0.2	0.2	U										
Vanadium	V	PMS	MS111911	50.0	0.2	0.2	U										

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ICS SOURCE: I.V.

RUNID: IP111671

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198988.9	194148.2	**97.1**	203627.5	201946.1	**101.0**	197978.0	196901.9	**98.5**
Antimony		1000	7.7	1012.6	**101.3**	8.0	1038.6	**103.9**	4.2	1032.5	**103.3**
Arsenic		1000	14.3	976.4	**97.6**	15.8	1005.5	**100.6**	16.4	1003.4	**100.3**
Barium		1000	-1.8	1005.3	**100.5**	-1.6	1064.1	**106.4**	-2.9	1020.2	**102.0**
Beryllium		1000	0.2	934.2	**93.4**	0.2	976.8	**97.7**	0.2	970.7	**97.1**
Boron			-0.6	-1.5		-2.7	-3.3		-3.6	-3.4	
Cadmium		1000	-0.3	1022.7	**102.3**	-0.2	1037.5	**103.8**	-0.6	1037.8	**103.8**
Calcium	100000	100000	97594.0	97457.4	**97.5**	101854.7	102165.0	**102.2**	98945.1	99798.3	**99.8**
Chromium		1000	-2.2	1004.0	**100.4**	-1.5	1056.9	**105.7**	-1.5	1039.4	**103.9**
Cobalt		1000	-0.8	992.3	**99.2**	-0.9	1021.2	**102.1**	-0.9	980.4	**98.0**
Copper		1000	-0.1	1023.3	**102.3**	0.3	1032.4	**103.2**	-0.4	1028.6	**102.9**
Iron	200000	200000	191940.1	191119.7	**95.6**	198295.7	198558.1	**99.3**	197639.7	199257.1	**99.6**
Lead		1000	2.2	960.2	**96.0**	1.0	986.9	**98.7**	2.6	982.0	**98.2**
Magnesium	100000	100000	102481.1	97554.2	**97.6**	105578.5	102153.7	**102.2**	98641.7	99250.0	**99.3**
Manganese		1000	0.5	957.2	**95.7**	0.7	994.8	**99.5**	0.7	992.7	**99.3**
Molybdenum			1.2	0.8		1.8	1.2		1.1	1.1	
Nickel		1000	0.1	937.2	**93.7**	0.4	986.2	**98.6**	0.0	954.9	**95.5**
Potassium			7.7	-29.1		14.4	-8.2		-7.9	-48.0	
Selenium		1000	16.9	967.0	**96.7**	17.4	997.2	**99.7**	14.3	998.0	**99.8**
Silicon			-1.6	-0.9		-1.4	0.1		0.8	3.0	
Silver		1000	-0.7	985.5	**98.6**	-0.8	999.7	**100.0**	-0.9	984.0	**98.4**
Sodium			16.3	30.9		10.2	26.9		12.8	23.4	
Strontium			3.9	3.7		3.9	3.9		3.9	3.9	
Thallium		1000	-0.6	911.1	**91.1**	-4.1	937.3	**93.7**	0.4	921.1	**92.1**
Tin			-7.6	-7.5		-8.7	-9.2		-7.4	-6.8	
Titanium			2.7	2.0		2.4	2.2		2.4	1.6	
Vanadium		1000	3.7	978.0	**97.8**	3.8	997.6	**99.8**	4.3	984.5	**98.5**
Zinc		1000	4.1	914.7	**91.5**	4.1	970.4	**97.0**	1.9	948.8	**94.9**

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ICS SOURCE: I.V.

RUNID: MS111511

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	**ICSA TV**	**ICSAB TV**	**ICSA1**	**ICSAB1**	**%R**	**ICSA2**	**ICSAB2**	**%R**	**ICSA3**	**ICSAB3**	**%R**
Antimony			0.1	0.1							
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.8	**99.0**						
Chromium		20	0.6	20.1	**100.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.9	20.6	**103.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	417.3	421.0	**105.3**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	20.3	**101.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	0.9	20.0	**100.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ICS SOURCE: I.V.

RUNID: MS111611

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.7	**98.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.7	**98.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	18.9	**94.5**						
Copper		20	1.2	20.9	**104.5**						
Manganese		20	0.1	19.4	**97.0**						
Molybdenum	400	400	449.1	461.4	**115.4**						
Nickel		20	0.4	20.0	**100.0**						
Selenium			-0.4	-0.4							
Silver		20	0.0	22.0	**110.0**						
Vanadium			0.1	0.1							
Zinc		20	1.7	19.8	**99.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ICS SOURCE: I.V.

RUNID: MS111911

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.3	**96.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.6	**98.0**						
Chromium		20	0.6	20.8	**104.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	1.2	20.8	**104.0**						
Manganese		20	0.1	19.0	**95.0**						
Molybdenum	400	400	426.2	433.4	**108.4**						
Nickel		20	0.4	20.6	**103.0**						
Selenium			-0.3	-0.3							
Silver		20	0.0	20.4	**102.0**						
Thorium			0.3	0.1							
Vanadium			0.2	0.1							
Zinc		20	1.3	19.9	**99.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR33

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	SA3-7CA	VR33APOST	MS111511	492.52	B	11.80	B	500	Soil	**96.1**

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: ICP

SDG: VR33

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Aluminum	SA3-7CL	VR33A-L	Soil	IP111671	58762.19		60399.15		2.8	
Barium	SA3-7CL	VR33A-L	Soil	IP111671	1201.61		1239.50		3.2	
Calcium	SA3-7CL	VR33A-L	Soil	IP111671	31760.35		32809.50		3.3	
Iron	SA3-7CL	VR33A-L	Soil	IP111671	71637.91		74693.80		4.3	
Magnesium	SA3-7CL	VR33A-L	Soil	IP111671	18237.40		19886.90	B	9.0	
Manganese	SA3-7CL	VR33A-L	Soil	IP111671	4359.17		4527.05		3.9	
Potassium	SA3-7CL	VR33A-L	Soil	IP111671	7232.91		7433.20	B	2.8	
Sodium	SA3-7CL	VR33A-L	Soil	IP111671	668.93	B	2500.00	U	100.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR33

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	SA3-7CL	VR33A-L	Soil	MS111511	0.59	B	0.65	B	10.2	
Arsenic	SA3-7CL	VR33A-L	Soil	MS111511	13.97		14.75	B	5.6	
Beryllium	SA3-7CL	VR33A-L	Soil	MS111511	0.49	B	0.50	B	2.0	
Cadmium	SA3-7CL	VR33A-L	Soil	MS111511	7.55		8.35	B	10.6	
Chromium	SA3-7CL	VR33A-L	Soil	MS111511	19.92		22.20	B	11.4	
Cobalt	SA3-7CL	VR33A-L	Soil	MS111511	6.58	B	7.50	B	14.0	
Copper	SA3-7CL	VR33A-L	Soil	MS111511	28.17		29.75	B	5.6	
Nickel	SA3-7CL	VR33A-L	Soil	MS111511	21.31	B	22.45	B	5.3	
Selenium	SA3-7CL	VR33A-L	Soil	MS111511	0.17	U	0.15	B		
Thallium	SA3-7CL	VR33A-L	Soil	MS111511	0.32	B	0.40	B	25.0	
Vanadium	SA3-7CL	VR33A-L	Soil	MS111511	17.97	B	19.95	B	11.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR33

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Lead	SA3-7CL	VR33A-L	Soil	MS111611	84.28		83.40		1.0	
Zinc	SA3-7CL	VR33A-L	Soil	MS111611	75.68		81.80	B	8.1	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR33

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Silver	SA3-7CL	VR33A-L	Soil	MS111911	0.21	B	0.25	B	19.0	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	4/1/2012	250000.0	7/30/2012
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR33

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0581760	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1637240
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0091790	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0392710
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0130090
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0442360
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2393490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0412430
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5321920
Manganese	257.61	0.0046450	0.0000000	0.0000000	0.0000000	0.0019080	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054280
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0108090	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1069480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1236770	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0477260	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0349450
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

VR33 : 0051

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR33

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0863140	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0084630	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1197150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

VR33.0002

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA3-7C	VR33A	1.049	0.0	50.0
SA3-7CD	VR33ADUP	1.044	0.0	50.0
SA3-7CS	VR33ASPK	1.047	0.0	50.0
SA3-8C	VR33B	1.044	0.0	50.0
SA3-Field Duplicat	VR33C	1.049	0.0	50.0
SA4-1C	VR33D	1.060	0.0	50.0
SA4-1P-1(0 to 3	VR33E	1.079	0.0	50.0
SA4-1P-2(3 to 6	VR33F	1.049	0.0	50.0
SA4-1P-3(6 to 12	VR33G	1.087	0.0	50.0
SA4-1P-4(12 to 24	VR33H	1.039	0.0	50.0
SA4-2C	VR33I	1.024	0.0	50.0
SA4-3C	VR33J	1.067	0.0	50.0
SA4-4C	VR33K	1.020	0.0	50.0
SA4-5C	VR33L	1.008	0.0	50.0
PBS	VR33MB1	1.000	0.0	50.0
LCSS	VR33MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA3-7C	VR33A	1.032	0.0	50.0
SA3-7CD	VR33ADUP	1.033	0.0	50.0
SA3-7CS	VR33ASPK	1.032	0.0	50.0
SA3-8C	VR33B	1.064	0.0	50.0
SA3-Field Duplicat	VR33C	1.035	0.0	50.0
SA4-1C	VR33D	1.082	0.0	50.0
SA4-1P-1(0 to 3	VR33E	1.050	0.0	50.0
SA4-1P-2(3 to 6	VR33F	1.051	0.0	50.0
SA4-1P-3(6 to 12	VR33G	1.041	0.0	50.0
SA4-1P-4(12 to 24	VR33H	1.034	0.0	50.0
SA4-2C	VR33I	1.080	0.0	50.0
SA4-3C	VR33J	1.045	0.0	50.0
SA4-4C	VR33K	1.064	0.0	50.0
SA4-5C	VR33L	1.028	0.0	50.0
PBS	VR33MB1	1.000	0.0	50.0
LCSS	VR33MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 11/14/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA3-7C	VR33A	0.703	0.0	50.0
SA3-7CD	VR33ADUP	0.706	0.0	50.0
SA3-7CS	VR33ASPK	0.702	0.0	50.0
SA3-8C	VR33B	0.739	0.0	50.0
SA3-Field Duplicat	VR33C	0.746	0.0	50.0
SA4-1C	VR33D	0.712	0.0	50.0
SA4-1P-1(0 to 3	VR33E	0.729	0.0	50.0
SA4-1P-2(3 to 6	VR33F	0.738	0.0	50.0
SA4-1P-3(6 to 12	VR33G	0.746	0.0	50.0
SA4-1P-4(12 to 24	VR33H	0.719	0.0	50.0
SA4-2C	VR33I	0.737	0.0	50.0
SA4-3C	VR33J	0.723	0.0	50.0
SA4-4C	VR33K	0.721	0.0	50.0
SA4-5C	VR33L	0.725	0.0	50.0
PBS	VR33MB1	0.700	0.0	50.0
LCSW	VR33MB1SPK	0.700	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/16/2012

SDG: VR33 | RUNID: IP111671 | METHOD: ICP | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08401			X			X		X					X		X	X	X		X											
S2	S2	1.00	08443						X											X													
S3	S3	1.00	08473																														
S4	S4	1.00	08501																														
S5	S5	1.00	08522			X					X					X		X	X			X											
S2	S2	1.00	09033						X											X													
ICV	ICV	1.00	09052			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09091			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09132			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09174			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09220			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09265			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09314			X			X		X					X		X	X	X		X											
ZZZZZZ	VR30B	5.00	09360																														
ZZZZZZ	VR30D	5.00	09400																														
ZZZZZZ	VR30E	5.00	09440																														
ZZZZZZ	VR30F	5.00	09480																														
ZZZZZZ	VR30G	5.00	09520																														
ZZZZZZ	VR30H	5.00	09560																														
CCV	CCV2	1.00	10000			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10050			X			X		X					X		X	X	X		X											
ZZZZZZ	VR32A-L	5.00	10091																														
ZZZZZZ	VR32A	5.00	10131																														
ZZZZZZ	VR32ADUP	5.00	10171																														
ZZZZZZ	VR32ASPK	5.00	10212																														
ZZZZZZ	ZZZZZZ	5.00	10250																														
ZZZZZZ	VR32L	5.00	10280																														
CCV	CCV3	1.00	10321			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	10361			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	10403			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	10445			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	10490			X			X		X					X		X	X	X		X											
CCV	CCV4	1.00	10525			X			X		X					X		X	X	X		X											
CCB	CCB4	1.00	10575			X			X		X					X		X	X	X		X											
ZZZZZZ	VR34MB1	2.00	11020																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

INSTRUMENT ID: OPTIMA ICP 2

RUNID: IP111671 METHOD: ICP

START DATE: 11/16/2012

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR34B	5.00	11062																														
ZZZZZZ	VR34C	5.00	11102																														
ZZZZZZ	VR34D	5.00	11142																														
ZZZZZZ	ZZZZZZ	25.00	11182																														
ZZZZZZ	VR34A	5.00	11222																														
ZZZZZZ	VR34ADUP	5.00	11262																														
ZZZZZZ	VR34ASPK	5.00	11302																														
ZZZZZZ	ZZZZZZ	5.00	11341																														
ZZZZZZ	VR34MB1SPK	2.00	11380																														
CCV	CCV5	1.00	11420			X			X		X					X		X	X	X		X											
CCB	CCB5	1.00	11465			X			X		X					X		X	X	X		X											
CCV	CCV6	1.00	12110			X			X		X					X		X	X	X		X											
CCB	CCB6	1.00	12155			X			X		X					X		X	X	X		X											
ZZZZZZ	VR34E	5.00	12201																														
ZZZZZZ	VR34F	5.00	12241																														
ZZZZZZ	VR34G	5.00	12281																														
ZZZZZZ	VR34H	5.00	12321																														
ZZZZZZ	VR34I	5.00	12361																														
ZZZZZZ	VR34J	5.00	12401																														
ZZZZZZ	VR34K	5.00	12441																														
ZZZZZZ	VR34L	5.00	12482																														
CCV	CCV7	1.00	12522			X			X		X					X		X	X	X		X											
CCB	CCB7	1.00	12572			X			X		X					X		X	X	X		X											
CCV	CCV8	1.00	13294			X			X		X					X		X	X	X		X											
CCB	CCB8	1.00	13345			X			X		X					X		X	X	X		X											
ZZZZZZ	VR34MB1	2.00	13391																														
ZZZZZZ	VR34B	5.00	13432																														
ZZZZZZ	VR34C	5.00	13472																														
ZZZZZZ	VR34D	5.00	13513																														
ZZZZZZ	VR34A-L	25.00	13553																														
ZZZZZZ	VR34A	5.00	13593																														
ZZZZZZ	VR34ADUP	5.00	14033																														
ZZZZZZ	VR34ASPK	5.00	14073																														
ZZZZZZ	ZZZZZZ	5.00	14113																														
ZZZZZZ	VR34MB1SPK	2.00	14153																														

FORM XIV

Analysis Run Log

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia   INSTRUMENT ID: OPTIMA ICP 2   START DATE: 11/16/2012

SDG: VR33   RUNID: IP111671   METHOD: ICP   END DATE: 11/16/2012

ANALYTICAL RESOURCES INCORPORATED

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	CCV9	1.00	14193			X			X		X					X		X	X	X		X											
CCB	CCB9	1.00	14234			X			X		X					X		X	X	X		X											
PBS	VR33MB1	2.00	14280			X			X		X					X		X	X	X		X											
SA3-8C	VR33B	5.00	14321			X			X		X					X		X	X	X		X											
SA3-Field Duplicat	VR33C	5.00	14361			X			X		X					X		X	X	X		X											
SA4-1C	VR33D	5.00	14400			X			X		X					X		X	X	X		X											
SA3-7CL	VR33A-L	25.00	14440			X			X		X					X		X	X	X		X											
SA3-7C	VR33A	5.00	14480			X			X		X					X		X	X	X		X											
SA3-7CD	VR33ADUP	5.00	14520			X			X		X					X		X	X	X		X											
SA3-7CS	VR33ASPK	5.00	14561			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	5.00	15001																														
LCSS	VR33MB1SPK	2.00	15031			X			X		X					X		X	X	X		X											
CCV	CCV10	1.00	15071			X			X		X					X		X	X	X		X											
CCB	CCB10	1.00	15120			X			X		X					X		X	X	X		X											
CCV	CCV11	1.00	15171			X			X		X					X		X	X	X		X											
CCB	CCB11	1.00	15212			X			X		X					X		X	X	X		X											
SA4-1P-1(0 to 3	VR33E	5.00	15270			X			X		X					X		X	X	X		X											
SA4-1P-2(3 to 6	VR33F	5.00	15310			X			X		X					X		X	X	X		X											
SA4-1P-3(6 to 12	VR33G	5.00	15350			X			X		X					X		X	X	X		X											
SA4-1P-4(12 to 24	VR33H	5.00	15390			X			X		X					X		X	X	X		X											
SA4-2C	VR33I	5.00	15430			X			X		X					X		X	X	X		X											
SA4-3C	VR33J	5.00	15470			X			X		X					X		X	X	X		X											
SA4-4C	VR33K	5.00	15511			X			X		X					X		X	X	X		X											
SA4-5C	VR33L	5.00	15551			X			X		X					X		X	X	X		X											
CCV	CCV12	1.00	15591			X			X		X					X		X	X	X		X											
CCB	CCB12	1.00	16041			X			X		X					X		X	X	X		X											
CRI	CRIF1	1.00	16083			X			X		X					X		X	X	X		X											
ICSA	ICSAF1	1.00	16125			X			X		X					X		X	X	X		X											
ICSAB	ICSABF1	1.00	16170			X			X		X					X		X	X	X		X											
CCV	CCV13	1.00	16205			X			X		X					X		X	X	X		X											
CCB	CCB13	1.00	16250			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111511 METHOD: PMS

START DATE: 11/15/2012

END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11590				X			X		X	X	X	X								X	X	X	X				X		X	X
S1	S1	1.00	12030				X			X		X	X	X	X								X	X	X	X				X		X	X
S2	S2	1.00	12070				X			X		X	X	X	X								X	X	X	X				X		X	X
S3	S3	1.00	12110				X			X		X	X	X	X								X	X	X	X				X		X	X
S4	S4	1.00	12160				X			X		X	X	X	X								X	X	X	X				X		X	X
S5	S5	1.00	12220																														
ZZZZZZ	Rinse sampl	1.00	12290																														
ZZZZZZ	ZZZZZZ	1.00	12370																														
ICV	MICV	1.00	12450				X			X		X	X	X	X								X	X	X	X				X		X	X
ICB	ICB	1.00	12540				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV1	1.00	12580				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB1	1.00	13050				X			X		X	X	X	X								X	X	X	X				X		X	X
CRI	MCRI	1.00	13090				X			X		X	X	X	X								X	X	X	X				X		X	X
ICSA	ICSAI	1.00	13130				X			X		X	X	X	X								X	X	X	X				X		X	X
ICSAB	ICSABI	1.00	13190				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	LR200	1.00	13260																														
ZZZZZZ	LR300	1.00	13330																														
ZZZZZZ	B1	1.00	13400																														
ZZZZZZ	B2	1.00	13460																														
ZZZZZZ	B3	1.00	13520																														
CCV	MCCV2	1.00	13560				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB2	1.00	14030				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31MB1	20.00	14070																														
ZZZZZZ	VR31MB1SPK	20.00	14110																														
ZZZZZZ	VR31A-L	100.00	14160																														
ZZZZZZ	VR31A	20.00	14200																														
ZZZZZZ	VR31ADUP	20.00	14240																														
ZZZZZZ	VR31ASPK	20.00	14280																														
ZZZZZZ	VR31APOST	20.00	14320																														
ZZZZZZ	VR31C	20.00	14360																														
ZZZZZZ	VR31D	20.00	14410																														
ZZZZZZ	VR31E	20.00	14450																														
CCV	MCCV3	1.00	14500				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB3	1.00	14560				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31J	20.00	15150																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR33 | RUNID: MS111511 METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR31F	20.00	15190																														
ZZZZZZ	VR31H	20.00	15240																														
ZZZZZZ	VR31K	100.00	15280																														
ZZZZZZ	VR31K	20.00	15320																														
ZZZZZZ	VR31L	20.00	15360																														
ZZZZZZ	VR31I	20.00	15420																														
ZZZZZZ	VR31G	20.00	15460																														
ZZZZZZ	VR31B	400.00	15500																														
ZZZZZZ	VR31B	20.00	15540																														
CCV	MCCV4	1.00	15580				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB4	1.00	16050				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR30MB1	20.00	16120																														
ZZZZZZ	VR30MB1SPK	20.00	16160																														
ZZZZZZ	VR30A-L	100.00	16210																														
ZZZZZZ	VR30A	20.00	16250																														
ZZZZZZ	VR30ADUP	20.00	16290																														
ZZZZZZ	VR30ASPK	20.00	16330																														
ZZZZZZ	VR30APOST	20.00	16370																														
ZZZZZZ	VR30B	20.00	16410																														
ZZZZZZ	VR30C	20.00	16460																														
ZZZZZZ	VR30D	20.00	16500																														
CCV	MCCV5	1.00	16550				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB5	1.00	17020				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32MB1	20.00	17070																														
ZZZZZZ	VR32MB1SPK	20.00	17110																														
ZZZZZZ	VR30E	20.00	17160																														
ZZZZZZ	VR30F	20.00	17200																														
ZZZZZZ	VR30G	20.00	17240																														
ZZZZZZ	VR30H	20.00	17280																														
ZZZZZZ	VR30I	20.00	17320																														
ZZZZZZ	VR30J	20.00	17360																														
ZZZZZZ	VR30K	20.00	17410																														
ZZZZZZ	VR30L	20.00	17450																														
CCV	MCCV6	1.00	17500				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB6	1.00	17560				X			X		X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR33 | RUNID: MS111511 | METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	18020				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV7	1.00	18060				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB7	1.00	18130				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32A-L	100.00	18180																														
ZZZZZZ	VR32A	20.00	18220																														
ZZZZZZ	VR32ADUP	20.00	18260																														
ZZZZZZ	VR32ASPK	20.00	18300																														
ZZZZZZ	VR32APOST	20.00	18340																														
ZZZZZZ	VR32B	20.00	18390																														
ZZZZZZ	VR32C	20.00	18430																														
ZZZZZZ	VR32D	20.00	18470																														
ZZZZZZ	VR32E	20.00	18520																														
ZZZZZZ	VR32F	20.00	18560																														
CCV	MCCV8	1.00	19000				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB8	1.00	19070				X			X		X	X	X	X								X	X	X	X				X		X	X
PBS	VR33MB1	20.00	19110				X					X	X	X	X								X	X	X	X				X		X	X
LCSS	VR33MB1SPK	20.00	19160				X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32G	20.00	19200																														
ZZZZZZ	VR32H	20.00	19240																														
ZZZZZZ	VR32I	20.00	19280																														
ZZZZZZ	VR32J	20.00	19320																														
ZZZZZZ	VR32K	20.00	19360																														
ZZZZZZ	VR32L	20.00	19400																														
SA3-8C	VR33B	20.00	19450				X					X	X	X	X								X	X	X	X				X		X	X
SA3-Field Duplicat	VR33C	20.00	19500				X					X			X								X		X	X				X			
CCV	MCCV9	1.00	19540				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB9	1.00	20010				X			X		X	X	X	X								X	X	X	X				X		X	X
SA3-7CL	VR33A-L	100.00	20050				X			X		X	X	X	X								X		X	X				X		X	
SA3-7C	VR33A	20.00	20090				X			X		X	X	X	X								X		X	X				X		X	
SA3-7CD	VR33ADUP	20.00	20130				X			X		X	X	X	X								X		X	X				X		X	
SA3-7CS	VR33ASPK	20.00	20170				X			X		X	X	X	X								X		X	X				X		X	
SA3-7CA	VR33APOST	20.00	20210																						X								
SA4-1C	VR33D	20.00	20250				X			X		X	X	X	X								X	X	X	X				X		X	X
SA4-1P-1(0 to 3	VR33E	20.00	20300				X			X		X	X	X	X								X	X	X	X				X		X	
SA4-1P-2(3 to 6	VR33F	20.00	20340				X			X		X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR33 | RUNID: MS111511 | METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA4-1P-3(6 to 12	VR33G	20.00	20390				X			X		X	X	X	X								X	X	X	X				X		X	X
SA4-1P-4(12 to 24	VR33H	20.00	20430				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV10	1.00	20470				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB10	1.00	20540				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR34MB1	20.00	20580																														
ZZZZZZ	VR34MB1SPK	20.00	21020																														
SA4-2C	VR33I	20.00	21060				X					X	X	X	X								X	X	X	X				X		X	X
SA4-3C	VR33J	20.00	21100				X					X	X	X	X								X		X	X				X		X	
SA4-4C	VR33K	20.00	21150				X					X	X	X	X								X	X	X	X				X		X	
SA4-5C	VR33L	20.00	21190				X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR34B	20.00	21230																														
ZZZZZZ	VR34C	20.00	21270																														
ZZZZZZ	VR34D	20.00	21320																														
ZZZZZZ	VR34E	20.00	21360																														
CCV	MCCV11	1.00	21400				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB11	1.00	21470				X			X		X	X	X	X								X	X	X	X				X		X	X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR33

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111611 METHOD: PMS

START DATE: 11/16/2012

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	14450							X														X									X
S1	S1	1.00	14490							X														X									X
S2	S2	1.00	14540							X														X									X
S3	S3	1.00	14580							X														X									X
S4	S4	1.00	15030							X														X									X
S5	S5	1.00	15090																														
ZZZZZZ	Rinse sampl	1.00	15160																														
ICV	MICV	1.00	15220							X														X									X
ICB	ICB	1.00	15290							X														X									X
CCV	MCCV1	1.00	15330							X														X									X
CCB	CCB1	1.00	15400							X														X									X
CRI	MCRI	1.00	15440							X														X									X
ZZZZZZ	ZZZZZZ	1.00	15480																														
ICSAB	ICSABI	1.00	15550							X														X									X
ZZZZZZ	LR200	1.00	16020																														
ZZZZZZ	LR300	1.00	16090																														
ZZZZZZ	B1	1.00	16150																														
ZZZZZZ	B2	1.00	16210																														
ICSA	ICSAI	1.00	16270							X														X									X
ZZZZZZ	B3	1.00	16320																														
CCV	MCCV2	1.00	16370							X														X									X
CCB	CCB2	1.00	16440							X														X									X
ZZZZZZ	VR32MB1	20.00	16480																														
ZZZZZZ	VR32MB1SPK	20.00	16520																														
ZZZZZZ	VR30E	20.00	16560																														
ZZZZZZ	VR30F	20.00	17010																														
ZZZZZZ	VR30G	20.00	17050																														
ZZZZZZ	VR30H	20.00	17090																														
ZZZZZZ	VR30I	20.00	17130																														
ZZZZZZ	VR30J	20.00	17170																														
ZZZZZZ	VR30K	20.00	17220																														
ZZZZZZ	VR30L	20.00	17260																														
CCV	MCCV3	1.00	17310							X														X									X
CCB	CCB3	1.00	17370							X														X									X
ZZZZZZ	VR32A-L	100.00	17430																														

FORM XIV

Analysis Run Log

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/16/2012

SDG: VR33 | RUNID: MS111611 | METHOD: PMS | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR32A	20.00	17470																														
ZZZZZZ	VR32ADUP	20.00	17510																														
ZZZZZZ	VR32ASPK	20.00	17550																														
ZZZZZZ	VR32B	20.00	17590																														
ZZZZZZ	VR32C	20.00	18030																														
ZZZZZZ	VR32D	20.00	18090																														
ZZZZZZ	VR32E	100.00	18130																														
ZZZZZZ	VR32F	20.00	18170																														
ZZZZZZ	VR32G	20.00	18210																														
CCV	MCCV4	1.00	18250							X														X									X
CCB	CCB4	1.00	18320							X														X									X
PBS	VR33MB1	20.00	18380							X																							
LCSS	VR33MB1SPK	20.00	18420							X																							
ZZZZZZ	VR32H	20.00	18460																														
ZZZZZZ	VR32I	20.00	18500																														
ZZZZZZ	VR32J	20.00	18550																														
ZZZZZZ	VR32K	20.00	18590																														
ZZZZZZ	VR32L	100.00	19030																														
ZZZZZZ	VR32L	20.00	19070																														
SA3-8C	VR33B	20.00	19120							X																							
SA3-Field Duplicat	VR33C	20.00	19160							X																							
CCV	MCCV5	1.00	19200							X														X									X
CCB	CCB5	1.00	19270							X														X									X
SA3-7CL	VR33A-L	500.00	19350																					X									X
SA3-7C	VR33A	100.00	19390																					X									X
SA3-7CD	VR33ADUP	100.00	19430																					X									X
SA3-7CS	VR33ASPK	100.00	19480																					X									X
SA3-Field Duplicat	VR33C	100.00	19520																					X									X
SA4-1P-1(0 to 3	VR33E	100.00	19560																														X
SA4-2C	VR33I	20.00	20000							X																							
SA4-3C	VR33J	100.00	20040																					X									X
SA4-3C	VR33J	20.00	20090							X																							
ZZZZZZ	VR32E	20.00	20130																														
CCV	MCCV6	1.00	20180							X														X									X
CCB	CCB6	1.00	20240							X														X									X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

INSTRUMENT ID: NEXION 300D MS

START DATE: 11/16/2012

SDG: VR33

RUNID: MS111611

METHOD: PMS

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR34MB1	20.00	20290																														
ZZZZZZ	VR34MB1SPK	20.00	20330																														
SA4-4C	VR33K	100.00	20370																														X
SA4-4C	VR33K	20.00	20410							X																							
SA4-5C	VR33L	20.00	20450							X																							
ZZZZZZ	VR34B	100.00	20490																														
ZZZZZZ	VR34B	20.00	20530																														
ZZZZZZ	VR34C	20.00	20570																														
ZZZZZZ	VR34D	100.00	21030																														
ZZZZZZ	VR34D	20.00	21070																														
CCV	MCCV7	1.00	21110							X														X									X
CCB	CCB7	1.00	21180							X														X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/19/2012

SDG: VR33 | RUNID: MS111911 | METHOD: PMS | END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	12460		X								X	X																		X	
S1	S1	1.00	12500		X								X	X																		X	
S2	S2	1.00	12540		X								X	X																		X	
S3	S3	1.00	12590		X								X	X																		X	
S4	S4	1.00	13030		X								X	X																		X	
S5	S5	1.00	13090																														
ZZZZZZ	Rinse sampl	1.00	13160																														
ICV	MICV	1.00	13230		X								X	X																		X	
ICB	ICB	1.00	13300		X								X	X																		X	
CCV	MCCV1	1.00	13340		X								X	X																		X	
CCB	CCB1	1.00	13410		X								X	X																		X	
CRI	MCRI	1.00	13450		X								X	X																		X	
ICSA	ICSAI	1.00	13490		X								X	X																		X	
ICSAB	ICSABI	1.00	13550		X								X	X																		X	
ZZZZZZ	LR200	1.00	14020																														
ZZZZZZ	LR300	1.00	14090																														
ZZZZZZ	B1	1.00	14160																														
ZZZZZZ	B2	1.00	14220																														
ZZZZZZ	B3	1.00	14280																														
CCV	MCCV2	1.00	14320		X								X	X																		X	
CCB	CCB2	1.00	14390		X								X	X																		X	
ZZZZZZ	VR32A-L	100.00	14460																														
ZZZZZZ	VR32A	20.00	14500																														
ZZZZZZ	VR32ADUP	20.00	14540																														
ZZZZZZ	VR32ASPK	20.00	14580																														
ZZZZZZ	VR32B	20.00	15020																														
ZZZZZZ	VR32C	20.00	15060																														
ZZZZZZ	VR32D	20.00	15100																														
ZZZZZZ	VR32E	20.00	15150																														
ZZZZZZ	VR32F	20.00	15200																														
ZZZZZZ	VR32G	20.00	15240																														
CCV	MCCV3	1.00	15280		X								X	X																		X	
CCB	CCB3	1.00	15350		X								X	X																		X	
PBS	VR33MB1	20.00	15410		X																												
LCSS	VR33MB1SPK	20.00	15450		X																												

FORM XIV

VR33 : 6975

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/19/2012

SDG: VR33 | RUNID: MS111911 METHOD: PMS | END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR32H	20.00	15490																														
ZZZZZZ	VR32I	20.00	15530																														
ZZZZZZ	VR32J	20.00	15570																														
ZZZZZZ	VR32K	20.00	16010																														
ZZZZZZ	VR32L	100.00	16070																														
ZZZZZZ	VR32L	20.00	16110																														
SA3-Field Duplicat	VR33C	100.00	16150										X	X																		X	
SA3-Field Duplicat	VR33C	20.00	16190		X																												
CCV	MCCV4	1.00	16230		X								X	X																		X	
CCB	CCB4	1.00	16300		X								X	X																		X	
SA3-7CL	VR33A-L	100.00	16350		X																												
SA3-7C	VR33A	20.00	16390		X																												
SA3-7CD	VR33ADUP	20.00	16430		X																												
SA3-7CS	VR33ASPK	20.00	16470		X																												
SA3-8C	VR33B	20.00	16520		X																												
SA4-1C	VR33D	20.00	16560		X																												
SA4-1P-1(0 to 3	VR33E	20.00	17000		X																												
SA4-1P-2(3 to 6	VR33F	20.00	17040		X																												
SA4-1P-3(6 to 12	VR33G	20.00	17090		X																												
SA4-1P-4(12 to 24	VR33H	20.00	17130		X																												
CCV	MCCV5	1.00	17170		X								X	X																		X	
CCB	CCB5	1.00	17240		X								X	X																		X	
ZZZZZZ	VR34A-L	500.00	17340																														
ZZZZZZ	VR34A	100.00	17380																														
ZZZZZZ	VR34ADUP	100.00	17420																														
ZZZZZZ	VR34ASPK	100.00	17460																														
ZZZZZZ	VR34B	20.00	17500																														
ZZZZZZ	VR34C	20.00	17550																														
SA4-2C	VR33I	20.00	17590		X																												
SA4-3C	VR33J	20.00	18030		X																												
SA4-4C	VR33K	20.00	18080		X																												
SA4-5C	VR33L	20.00	18120		X																												
CCV	MCCV6	1.00	18160		X								X	X																		X	
CCB	CCB6	1.00	18230		X								X	X																		X	

VR33 : 9007

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: CETAC MERCURY START DATE: 11/17/2012

SDG: VR33 RUNID: HG111701 METHOD: CVA END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	06462														X																
S0.1	S0.1	1.00	06475														X																
S0.5	S0.5	1.00	06493														X																
S1	S1	1.00	06511														X																
S2	S2	1.00	06524														X																
S5	S5	1.00	06542														X																
S10	S10	1.00	06560														X																
ICV	AICV	1.00	07050														X																
ICB	ICB	1.00	07063														X																
CCV	ACCV1	1.00	07081														X																
CCB	CCB1	1.00	07095														X																
CRA	CRA	1.00	07113														X																
ZZZZZZ	VS18MB1	1.00	07130																														
ZZZZZZ	VS18MB1SPK	1.00	07144																														
ZZZZZZ	VS18A	1.00	07161																														
ZZZZZZ	VS18ADUP	1.00	07175																														
ZZZZZZ	VS18ASPK	1.00	07193																														
ZZZZZZ	VS18B	1.00	07210																														
ZZZZZZ	VS18C	1.00	07224																														
ZZZZZZ	VS18D	1.00	07242																														
ZZZZZZ	VS18E	1.00	07260																														
CCV	ACCV2	1.00	07274														X																
CCB	CCB2	1.00	07292														X																
ZZZZZZ	VS18F	1.00	07310																														
ZZZZZZ	VS18G	1.00	07323																														
ZZZZZZ	VS18H	1.00	07341																														
ZZZZZZ	VS18I	1.00	07354																														
ZZZZZZ	VS18J	1.00	07372																														
ZZZZZZ	VS18K	1.00	07385																														
ZZZZZZ	VS18L	1.00	07403																														
ZZZZZZ	VR37MB1	1.00	07421																														
ZZZZZZ	VR37MB1SPK	1.00	07434																														
ZZZZZZ	VR37A	1.00	07452																														
CCV	ACCV3	1.00	07470														X																
CCV	ACCV4	1.00	07584														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR33 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	08002														X																
ZZZZZZ	VS18F	1.00	08020																														
ZZZZZZ	VS18G	1.00	08033																														
ZZZZZZ	VS18H	1.00	08051																														
ZZZZZZ	VS18I	1.00	08064																														
ZZZZZZ	VS18J	1.00	08082																														
ZZZZZZ	VS18K	1.00	08095																														
ZZZZZZ	VS18L	1.00	08113																														
ZZZZZZ	VR37MB1	1.00	08131																														
ZZZZZZ	VR37MB1SPK	1.00	08144																														
ZZZZZZ	VR37A	1.00	08162																														
CCV	ACCV5	1.00	08180														X																
CCB	CCB4	1.00	08194														X																
ZZZZZZ	VR37ADUP	1.00	08212																														
ZZZZZZ	VR37ASPK	1.00	08230																														
ZZZZZZ	VR37B	1.00	08243																														
ZZZZZZ	VR37C	1.00	08261																														
ZZZZZZ	VR37D	1.00	08274																														
ZZZZZZ	VR37E	1.00	08292																														
ZZZZZZ	VR37F	1.00	08310																														
ZZZZZZ	VR37G	1.00	08323																														
ZZZZZZ	VR37H	1.00	08341																														
ZZZZZZ	VR37I	1.00	08355																														
CCV	ACCV6	1.00	08373														X																
CCB	CCB5	1.00	08391														X																
ZZZZZZ	VR37J	1.00	08404																														
ZZZZZZ	VR37K	1.00	08422																														
ZZZZZZ	VR37L	1.00	08440																														
ZZZZZZ	VR37M	1.00	08454																														
ZZZZZZ	VR37N	1.00	08472																														
ZZZZZZ	VR37O	1.00	08485																														
ZZZZZZ	VR58MB1	1.00	08503																														
ZZZZZZ	VR58MB1SPK	1.00	08520																														
ZZZZZZ	VR58A	1.00	08534																														
ZZZZZZ	VR58ADUP	1.00	08552																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR33 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	08565														X																
CCB	CCB6	1.00	08584														X																
ZZZZZZ	VR58ASPK	1.00	09001																														
ZZZZZZ	VR58B	1.00	09015																														
ZZZZZZ	VR58C	1.00	09033																														
ZZZZZZ	VR58D	1.00	09051																														
ZZZZZZ	VR58E	1.00	09065																														
ZZZZZZ	VR58F	1.00	09082																														
ZZZZZZ	VR58G	1.00	09100																														
ZZZZZZ	VR58H	1.00	09114																														
ZZZZZZ	VR58I	1.00	09131																														
ZZZZZZ	VR58J	1.00	09145																														
CCV	ACCV8	1.00	09163														X																
CCB	CCB7	1.00	09181														X																
ZZZZZZ	VR82A	1.00	09195																														
ZZZZZZ	VR82B	1.00	09213																														
ZZZZZZ	VR82C	1.00	09230																														
ZZZZZZ	VR82D	1.00	09244																														
ZZZZZZ	VR82E	1.00	09262																														
ZZZZZZ	VR82F	1.00	09280																														
ZZZZZZ	VR82G	1.00	09294																														
ZZZZZZ	VR82H	1.00	09311																														
ZZZZZZ	VR82I	1.00	09325																														
CCV	ACCV9	1.00	09343														X																
CCB	CCB8	1.00	09361														X																
ZZZZZZ	VR30MB1	1.00	09382																														
ZZZZZZ	VR30MB1SPK	1.00	09395																														
ZZZZZZ	VR30A	1.00	09413																														
ZZZZZZ	VR30ADUP	1.00	09430																														
ZZZZZZ	VR30ASPK	1.00	09444																														
ZZZZZZ	VR30B	1.00	09461																														
ZZZZZZ	VR30C	1.00	09475																														
ZZZZZZ	VR30D	1.00	09492																														
ZZZZZZ	VR30E	1.00	09510																														
ZZZZZZ	VR30F	1.00	09524																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: CETAC MERCURY START DATE: 11/17/2012

SDG: VR33 RUNID: HG111701 METHOD: CVA END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV10	1.00	09542														X																
CCB	CCB9	1.00	09560														X																
ZZZZZZ	VR30G	1.00	09574																														
ZZZZZZ	VR30H	1.00	09592																														
ZZZZZZ	VR30I	1.00	10005																														
ZZZZZZ	VR30J	1.00	10023																														
ZZZZZZ	VR30K	1.00	10040																														
ZZZZZZ	VR30L	1.00	10054																														
ZZZZZZ	VR36MB1	1.00	10072																														
ZZZZZZ	VR36MB1SPK	1.00	10085																														
ZZZZZZ	VR36A	1.00	10103																														
ZZZZZZ	VR36ADUP	1.00	10121																														
CCV	ACCV11	1.00	10134														X																
CCB	CCB10	1.00	10152														X																
ZZZZZZ	VR36ASPK	1.00	10170																														
ZZZZZZ	VR36B	1.00	10184																														
ZZZZZZ	VR36C	1.00	10202																														
ZZZZZZ	VR36D	1.00	10220																														
ZZZZZZ	VR36E	1.00	10234																														
ZZZZZZ	VR36F	1.00	10251																														
ZZZZZZ	VR36G	1.00	10265																														
ZZZZZZ	VR36H	1.00	10282																														
ZZZZZZ	VR36I	1.00	10300																														
ZZZZZZ	VR36J	1.00	10314																														
CCV	ACCV12	1.00	10331														X																
CCB	CCB11	1.00	10345														X																
ZZZZZZ	VR36K	1.00	10363																														
ZZZZZZ	VR36L	1.00	10381																														
ZZZZZZ	VR35MB1	1.00	10395																														
ZZZZZZ	VR35MB1SPK	1.00	10413																														
ZZZZZZ	VR35A	1.00	10431																														
ZZZZZZ	VR35ADUP	1.00	10444																														
ZZZZZZ	VR35ASPK	1.00	10462																														
ZZZZZZ	VR35B	1.00	10480																														
ZZZZZZ	VR35C	1.00	10493																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: CETAC MERCURY START DATE: 11/17/2012

SDG: VR33 RUNID: HG111701 METHOD: CVA END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR35D	1.00	10511																														
CCV	ACCV13	1.00	10525														X																
CCB	CCB12	1.00	10543														X																
ZZZZZZ	VR35E	1.00	10561																														
ZZZZZZ	VR35F	1.00	10574																														
ZZZZZZ	VR35G	1.00	10592																														
ZZZZZZ	VR35H	1.00	11010																														
ZZZZZZ	VR35I	1.00	11024																														
ZZZZZZ	VR35J	1.00	11042																														
ZZZZZZ	VR35K	1.00	11060																														
ZZZZZZ	VR35L	1.00	11073																														
CCV	ACCV14	1.00	11091														X																
CCB	CCB13	1.00	11110														X																
ZZZZZZ	VR32MB1	1.00	11130																														
ZZZZZZ	VR32MB1SPK	1.00	11143																														
ZZZZZZ	VR32A	1.00	11161																														
ZZZZZZ	VR32ADUP	1.00	11174																														
ZZZZZZ	VR32ASPK	1.00	11192																														
ZZZZZZ	VR32B	1.00	11210																														
ZZZZZZ	VR32C	1.00	11223																														
ZZZZZZ	VR32D	1.00	11241																														
ZZZZZZ	VR32E	1.00	11255																														
ZZZZZZ	VR32F	1.00	11272																														
CCV	ACCV15	1.00	11290														X																
CCB	CCB14	1.00	11304														X																
ZZZZZZ	VR32G	1.00	11322																														
ZZZZZZ	VR32H	1.00	11340																														
ZZZZZZ	VR32I	1.00	11354																														
ZZZZZZ	VR32J	1.00	11371																														
ZZZZZZ	VR32K	1.00	11385																														
ZZZZZZ	VR32L	1.00	11402																														
ZZZZZZ	VR65MB1	1.00	11420																														
ZZZZZZ	VR65MB1SPK	1.00	11434																														
ZZZZZZ	VR65A	1.00	11451																														
ZZZZZZ	VR65ADUP	1.00	11465																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR33 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV16	1.00	11483														X																
CCB	CCB15	1.00	11501														X																
ZZZZZZ	VR65ASPK	1.00	11515																														
ZZZZZZ	VR65B	1.00	11533																														
ZZZZZZ	VR65C	1.00	11550																														
ZZZZZZ	VR65D	1.00	11564																														
ZZZZZZ	VR65E	1.00	11582																														
ZZZZZZ	VR65F	1.00	11595																														
ZZZZZZ	VR65G	1.00	12013																														
ZZZZZZ	VR65H	1.00	12031																														
ZZZZZZ	VR65I	1.00	12044																														
ZZZZZZ	VR65J	1.00	12062																														
CCV	ACCV17	1.00	12080														X																
CCB	CCB16	1.00	12094														X																
ZZZZZZ	VR65K	1.00	12112																														
ZZZZZZ	VR65L	1.00	12125																														
ZZZZZZ	VR38MB1	1.00	12143																														
ZZZZZZ	VR38MB1SPK	1.00	12161																														
ZZZZZZ	VR38A	1.00	12175																														
ZZZZZZ	VR38ADUP	1.00	12193																														
ZZZZZZ	VR38ASPK	1.00	12211																														
ZZZZZZ	VR38B	1.00	12224																														
ZZZZZZ	VR38C	1.00	12242																														
ZZZZZZ	VR38D	1.00	12255																														
CCV	ACCV18	1.00	12273														X																
CCB	CCB17	1.00	12291														X																
ZZZZZZ	VR38E	1.00	12305																														
ZZZZZZ	VR38F	1.00	12323																														
ZZZZZZ	VR38G	1.00	12341																														
ZZZZZZ	VR38H	1.00	12354																														
ZZZZZZ	VR38I	1.00	12372																														
ZZZZZZ	VR38J	1.00	12390																														
ZZZZZZ	VR38K	1.00	12404																														
CCV	ACCV19	1.00	12422														X																
CCB	CCB18	1.00	12440														X																

FORM XIV

VR33 : 00093

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR33 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
PBW	VR33MB1	1.00	12462														X																
LCSW	VR33MB1SPK	1.00	12480														X																
SA3-7C	VR33A	1.00	12493														X																
SA3-7CD	VR33ADUP	1.00	12511														X																
SA3-7CS	VR33ASPK	1.00	12524														X																
SA3-8C	VR33B	1.00	12542														X																
SA3-Field Duplicat	VR33C	1.00	12555														X																
SA4-1C	VR33D	1.00	12573														X																
SA4-1P-1(0 to 3	VR33E	1.00	12591														X																
SA4-1P-2(3 to 6	VR33F	1.00	13005														X																
CCV	ACCV20	1.00	13022														X																
CCB	CCB19	1.00	13041														X																
SA4-1P-3(6 to 12	VR33G	1.00	13054														X																
SA4-1P-4(12 to 24	VR33H	1.00	13072														X																
SA4-2C	VR33I	1.00	13090														X																
SA4-3C	VR33J	1.00	13103														X																
SA4-4C	VR33K	1.00	13121														X																
SA4-5C	VR33L	1.00	13134														X																
ZZZZZZ	VR34MB1	1.00	13152																														
ZZZZZZ	VR34MB1SPK	1.00	13170																														
ZZZZZZ	VR34A	1.00	13183																														
ZZZZZZ	VR34ADUP	1.00	13201																														
ZZZZZZ	ACCV21	1.00	13215																														
CCB	CCB20	1.00	13233														X																

VR33 : 6004

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: VR33

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-7C
ARI ID: 12-22201 VR33A

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.76
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	95.70
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	9.03

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-8C
ARI ID: 12-22202 VR33B

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.94
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	97.70
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	4.02

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA3-Field Duplicate
ARI ID: 12-22203 VR33C

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.41
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	94.90
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.198	15.7

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-1C
ARI ID: 12-22204 VR33D

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.00
Total Solids	11/12/12 111212#1	SM2540B	Percent	0.01	98.10
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	6.59

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-1P-1(0 to 3" depth)
ARI ID: 12-22205 VR33E

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.98
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.90
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.198	7.71

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-1P-2(3 to 6" depth)
ARI ID: 12-22206 VR33F

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.79
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	98.30
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.198	5.97

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-1P-3(6 to 12" depth)
ARI ID: 12-22207 VR33G

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.92
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	99.10
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	0.732

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-1P-4(12 to 24" depth)
ARI ID: 12-22208 VR33H

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.06
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	99.30
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	0.458

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA4-2C
ARI ID: 12-22209 VR33I

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.59
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.90
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.198	8.72

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-3C
ARI ID: 12-22210 VR33J

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	4.69
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	98.10
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.198	9.55

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA4-4C
ARI ID: 12-22211 VR33K

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.40
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.70
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.196	11.4

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA4-5C
ARI ID: 12-22212 VR33L

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.00
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	98.20
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.196	5.70

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

MS/MSD RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VR33E Client ID: SA4-1P-1(0 to 3" depth)						
Total Organic Carbon	11/26/12	Percent	7.71	44.9	36.4	102.1%

REPLICATE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR33A Client ID: SA3-7C					
pH	11/15/12	std units	5.76	5.76	0.00
ARI ID: VR33E Client ID: SA4-1P-1(0 to 3" depth)					
Total Solids	11/13/12	Percent	97.90	97.60 95.60	1.3%
Total Organic Carbon	11/26/12	Percent	7.71	8.26 7.92	3.5%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SW9045	ICVL	11/15/12	std units	6.97	7.00	0.03
Total Organic Carbon Plumb,1981	ICVL	11/26/12	Percent	0.096	0.100	96.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/12/12	Percent	< 0.01 U
	11/13/12		< 0.01 U
Total Organic Carbon	11/26/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR33-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	11/26/12	Percent	3.06	2.99	102.3%

Total Solids

ARI Job ID: VR33

Solids Data Entry Report Checked by: CB Date: 11/17/12
Date: 11/15/12 Data Analyst: DM

Solids Determination performed on 11/14/12 by DM

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
VR33	A	SA3-7C	1.016	10.633	10.157	95.05
VR33	B	SA3-8C	1.030	10.090	9.819	97.01
VR33	C	SA3-Field Duplicate	0.976	10.225	9.665	93.95
VR33	D	SA4-1C	0.961	10.608	10.350	97.33
VR33	E	SA4-1P-1(0 to 3	1.002	10.503	10.253	97.37
VR33	F	SA4-1P-2(3 to 6	0.997	10.488	10.283	97.84
VR33	G	SA4-1P-3(6 to 12	0.963	10.375	10.257	98.75
VR33	H	SA4-1P-4(12 to 24	1.008	10.665	10.560	98.91
VR33	I	SA4-2C	0.974	10.083	9.839	97.32
VR33	J	SA4-3C	1.008	10.389	10.210	98.09
VR33	K	SA4-4C	0.980	10.638	10.290	96.40
VR33	L	SA4-5C	1.001	10.938	10.708	97.69

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 11-14-12 Time: 1258 Temp: 102°c Analyst: DM

Removed from Oven: Date: 11-15-12 Time: 0740 Temp: 104°c Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
VR33 A	1.016	10.633	10.157	—	✓
" B	1.030	10.090	9.819	—	✓
" C	0.976	10.225	9.665	—	✓
" D	0.961	10.608	10.350	—	✓
" E	1.002	10.503	10.253	—	✓
" F	0.997	10.488	10.283	—	✓
" G	0.963	10.375	10.257	—	✓
" H	1.008	10.665	10.560	—	✓
" I	0.974	10.083	9.839	—	✓
" J	1.008	10.389	10.210	—	✓
" K	0.980	10.638	10.290	—	✓
" L	1.001	10.938	10.708	—	✓
		11-14-12 DM			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VR33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: SM **Final Volume** 50 **Sample ID** VR33 ASPK, MBSPK

Date: 11-14-12 **Final Volume (Hg):** 50

		Prepcode:	SWL		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	2971-9		
		Vol Added (mL):	1.0		
	Ag		50		2.0
S	Al		200 ✓	200	
T	As		200		10
O	Ba		200	200	
C	Be		50	50	
K	Ca		1000 ✓	1000	
	Cd		50		2.0
	Co		50	50	
C	Cr		50	50	
O	Cu		50	50	
N	Fe		200 ✓	200	
C	K		1000 ✓	1000	
E	Mg		1000 ✓	1000	
N	Mn		50	50	
T	Na		1000 ✓	1000	
R	Ni		50	50	
A	Pb		200		10
T	Se		200		10
I	Sr		50	50	
O	Tl		200		10
N	V		50	50	
	Zn		50	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	2987-2	2956-7	
	1.0	1.0	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25 ✓		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25 ✓		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25 ✓		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25 ✓		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SnM	CVA	1.0	0.05	2986-7
Hg MBSPK	↓	CVA	1.0	0.1	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

VR33 : 9057

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 11-14-12 Time: 1311

Matrix: Soil Block ID: #1 Block Temp: 98°C Thermometer: MP40

ARI Sample ID	Btl #	pH<2	Prep Code: SMC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SMC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR33 A	1	—	1.049	50.0	1.032	50.0	
" ADUP	1	—	1.044		1.033		
" ASPK	1	—	1.047		1.032		
" B	1	—	1.044		1.064		
" C	1	—	1.049		1.035		
" D	1	—	1.060		1.082		
" E	1	—	1.079		1.060		
" F	1	—	1.049		1.051		
" G	1	—	1.087		1.041		
" H	1	—	1.039		1.034		
" I	1	—	1.024		1.080		
" J	1	—	1.067		1.045		
" K	1	—	1.020		1.064		
" L	1	—	1.008		1.028		
" MB1	—	—	—		—		
" MB1SPK	—	—	—	50.0	—	50.0	

11-14-12 DM

Chemical/Reagent ID:

HNO_3: MP2590/I7833 HCl: I7676 H_2O_2: I7845 Tube Lot #: 1207143

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM Matrix: Soil
Analyst: DM Date: 11-14-12
Bath Temp: 95°C Start Time: 1335 End Time: 1405

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR33 A	1	—	0.703	50.0	11/16 1	Y	
" ADUP	1	—	0.706		1		
" ASPK	1	—	0.702		1		
" B	1	—	0.739		1		
" C	1	—	0.746		1		
" D	1	—	0.712		1		
" E	1	—	0.729		1		
" F	1	—	0.738		1		
" G	1	—	0.746		1		
" H	1	—	0.719		1		
" I	1	—	0.737		1		
" J	1	—	0.723		1		
" K	1	—	0.721		1		
" L	1	—	0.725		1		
" MB1	—	—	—		1		
" MB1SPK	—	—	—	50.0	1	Y	
			11-14-12	DM			

Chemical/Reagent ID:

HNO_3: I7833 H_2SO_4: I7677 HCl: —
5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 1205258

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	VR33
Unacceptable Blank:	☐	Date of Event:	11-17-12
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☒	Method/Element:	Hg CVA
Unacceptable Reference:	☐	Prep Code:	5mm

Details of Problem/Recommended Corrective Action:

1st Analysis: A - 1.41 ppb

ASPK - 2.15 ppb %R = 74 LOW

Samples Affected: A, ADUP, ASPK, MB, MBSPK

Corrective Action Taken:

Analyst Initials: DM

Date: 11-17-12

Supervisor:

Date: 11/19/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: VR33

Unacceptable Blank: ☐

Date of Event: 11.15.12

Unacceptable Duplicate: ☑

Client ID: Hunt Cranger

Unacceptable Spike: ☑

Method/Element: ICPMS

Unacceptable Reference: ☐

Prep Code: SWN

Details of Problem/Recommended Corrective Action:

A : 21.314 ppb Ni
ADUP: 16.938 ppb Ni RPD = 23

A: 0.556 ppb Sb
ASPK: 2.201 ppb Sb %R = 6.5 post-spike ok

(see attached)
A-L (100x) = 1.666 ppb Cd
A (20x) = 7.546 ppb Cd %Diff = 10.6

Samples Affected:

Corrective Action Taken:

Geel
11/19/12

Analyst Initials: MJT

Supervisor:

Date: 11.16.12

Date:

5049F

Revision 007
6/11/10

VR33:00111

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)								VR33 A	
		icpms							
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.033	1.032			SAMP WT	1.032	1.0320		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l				ug/l	ug/l	mg/L	#VALUE!
Be			#VALUE!		Be			25	0
Na			#DIV/0!		Na			5000	0
Mg			#VALUE!		Mg			5000	#VALUE!
Al			#VALUE!		Al			5000	#VALUE!
K			#DIV/0!		K			5000	0
Ca			#DIV/0!		Ca			5000	0
V	16.547	17.965	8.31		V	44.099	17.965	25	104.536
Cr	16.563	19.921	18.50		Cr	42.583	19.921	25	90.648
Fe			#VALUE!		Fe			5000	#VALUE!
Mn			#VALUE!		Mn			25	#VALUE!
Co	6.195	6.576	6.06		Co	31.849	6.576	25	101.092
Ni	16.938	21.314	22.98		Ni	44.076	21.314	25	91.048
Cu	27.9830	28.166	0.75		Cu	55.959	28.166	25	111.172
Zn			#VALUE!		Zn			80	#VALUE!
As	14.229	13.97	1.74		As	41.22	13.97	25	109
Se	0	0	#DIV/0!		Se	81.084	0	80	101.355
Mo			#VALUE!		Mo			25	#VALUE!
Ag			#VALUE!		Ag			25	#VALUE!
Cd	7.45	7.546	1.38		Cd	33.322	7.546	25	103.104
Sb	0.624	0.586	6.18		Sb	2.201	0.586	25	6.46
Ba			#VALUE!		Ba			25	#VALUE!
Tl	0.325	0.323	0.52		Tl	26.098	0.323	25	103.1
Pb			#VALUE!		Pb			25	0

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory
Analyst Notes

ARI Job No.: VR33

Client ID: Hart Crowser

Parameter: ICP

Client Project: Upper Columbia

List problems, concerns, corrective actions and any other pertinent information
CCV 10 of ICP run on 11-16-12 had multiple elements failing high. Immediate rerun (CCV11) was in control. All bracketed data was reported.

Analyst Initials:	BA	Date:	11-20-12

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VR33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-16-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Insufficient volume
		3			2991-5
		4			-6
		5			-7
		2			-4
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VR30 B	SWC	5	
		D			
		E			
		F			
		G			
		H			
		CCV2			
		CCB2			
		VR32 A-L	SWC	25	
		A		5	
		ADUP			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 11-16-12 **Analyst:** BA

LR Date: — **Page:** 2 **of** 6

All corrections made by analyst unless otherwise noted. BA 11-16-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR32 ASPK	SWC	5	✓ Al ~~Cu~~ Fe Mn STL
		~~APOST~~	↓	↓	✓(0.08 mL ICP Spike 2977-9) ↓ AH 11-20
		↓ L	↓	↓	
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End VR30, 32
	✓	VR34 MB1	SWC	2	
	✓	B		5	
	✓	C		↓	
	✓	D		↓	
	✓	~~AL~~		25	
	✓	A		5	
	✓	ADUP		↓	
	✓	ASPK		↓	
	✓	~~APOST~~		↓	0.08 mL ICP Spike 2977-9
	✓	↓ MB1SPK	↓	2	
		CCV5			Ba, Cr, Fe, Mg, Na 330, Si ↑
		CCB5			↓ ~25 min delay
		CCV6			
		CCB6			

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Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: —— **Analysis Date:** 11-16-12 **Analyst:** BA
LR Date: —— **Page:** 3 **of** 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR34 E	SWC	5	
		F	↓	↓	
		G	↓	↓	
		H	↓	↓	
		I	↓	↓	
		J	↓	↓	
		K	↓	↓	
		L	↓	↓	
		CCV7			
		CCB7			} 1/2 hr delay
		CCV8			
		CCB8			
		VR34 MB1	SWC	2	
		B	↓	5	
		C	↓	↓	
		D	↓	↓	
		A-L	↓	25	✓
		A	↓	5	
		ADUP	↓	↓	✓
		ASPK	↓	↓	✓ Al, Fe, Mn STL Ca↑
		AY 11-20 ~~APOST~~	↓	↓	✓ (0.95 ml SS Spike 29177-9) ↓ Ca OK (C.A.F)
		MB1SPK	↓	2	✓
		CCV9			
		CCB9			

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 11-16-12 **Analyst:** BA

LR Date: — **Page:** 4 **of** 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR33 MB1	SWC	2	
		B	↓	5	
		C		↓	
		D		↓	
		A-L		25	✓
		A		5	
		ADUP		↓	✓
		ASPK			✓ Al Fe Mn STL Mg ↑
	#11-20	~~APOST~~		↓	✓ (0.05 mL ICP Spike 2977-A) ↓ Mg ↑ (A.F.)
		↓ MB1SPK	↓	2	✓
		CCV10			Al, Ba, Cd, Ca, Cr, Cu, Fe, Mg, Mn, Mo, Na 330, Pb, Sb, Si, Sn, Ti, V, Zn ↑ (A.N.)
		CCB10			
		CCV11			
		CCB11			
		VR33 E	SWC	5	
		F	↓	↓	
		G			
		H			
		I			
		J			
		K			
		↓ L	↓	↓	
		CCV12			
		CCB12			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 5 of 6

All corrections made by analyst unless otherwise noted. BA 11-19-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CRI			
		ICSA			
		ICSAB			
		CCV13			
		CCB13			End VR34, VR33
		VR36 MB1	SWC	2	M_n > BL(0.00115 mg/L) - AJN.
		B		5	
		C		↓	
		D		↓	
		A-L		25 ✓	
		A		5	
		ADUP		↓ ✓	
		ASPK		↓ ✓	Al, Fe STL
		~~ZZZZZZ~~ ~~APOST~~		↓ ✓	↓ (0.05 mL ICP Spike 2977-9)
		MB1SPK	↓	2 ✓	
		CCV14			
		CCB14			
	✓	VR36 E	SWC	5	Failing CCV
	✓	F			
	✓	G			
	✓	H			
	✓	I			
	✓	J			
	✓	K			

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-16-12

ICP - 2	Analyst BA 11-20-12	Peer H 11-20	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See log
Internal Standards	✓	✓	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See log - VR34, VR33
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	See log - VR36
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	~~CAF - VR34, VR33~~ A.N. - VR33, VR36

Analysis Begun

Start Time: 11/16/2012 8:40:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/16/2012 8:40:14 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2257192.3	5062.38	0.22%	100.0	%
ScR 361.383	285929.2	1391.38	0.49%	100.0	%
Ag 328.068†	-156.2	13.31	8.52%	[0.00]	mg/L
Al 308.215†	147.1	12.17	8.28%	[0.00]	mg/L
As 188.979†	-9.5	1.63	17.14%	[0.00]	mg/L
B 249.677†	40.2	10.66	26.54%	[0.00]	mg/L
Ba 233.527†	19.9	6.07	30.52%	[0.00]	mg/L
Be 313.042†	905.1	35.52	3.92%	[0.00]	mg/L
Ca 317.933†	161.6	10.52	6.51%	[0.00]	mg/L
Cd 228.802†	303.7	1.47	0.48%	[0.00]	mg/L
Co 228.616†	-63.9	0.59	0.92%	[0.00]	mg/L
Cr 267.716†	-81.8	5.34	6.52%	[0.00]	mg/L
Cu 324.752†	2486.2	26.59	1.07%	[0.00]	mg/L
Fe 273.955†	14.2	2.43	17.08%	[0.00]	mg/L
K 766.490†	498.6	23.15	4.64%	[0.00]	mg/L
Mg 279.077†	83.4	7.46	8.95%	[0.00]	mg/L
Mn 257.610†	157.9	1.11	0.71%	[0.00]	mg/L
Mo 202.031†	66.0	0.64	0.97%	[0.00]	mg/L
Na 589.592†	-326.9	3.37	1.03%	[0.00]	mg/L
Na 330.237†	-205.1	3.78	1.84%	[0.00]	mg/L
Ni 231.604†	-23.4	4.31	18.37%	[0.00]	mg/L
Pb 220.353†	62.2	0.92	1.47%	[0.00]	mg/L
Sb 206.836†	64.7	1.51	2.33%	[0.00]	mg/L
Se 196.026†	-53.9	5.80	10.77%	[0.00]	mg/L
Si 288.158†	61.1	6.41	10.48%	[0.00]	mg/L
Sn 189.927†	0.6	3.59	648.11%	[0.00]	mg/L
Sr 421.552†	398.0	32.76	8.23%	[0.00]	mg/L
Ti 334.903†	-53.4	5.15	9.65%	[0.00]	mg/L
Tl 190.801†	-42.6	0.94	2.21%	[0.00]	mg/L
V 292.402†	180.2	30.85	17.12%	[0.00]	mg/L
Zn 206.200†	26.6	1.80	6.77%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 11/16/2012 8:44:35 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	5162065.8	309107.01	5.99%	228.7	%
ScR 361.383	753266.5	90956.28	12.07%	263.4	%
Ba 233.527†	1874.1	1447.51	77.24%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cd 228.802†	33927.3	6109.66	18.01%	[10]	mg/L
Co 228.616†	36364.7	6783.73	18.65%	[10]	mg/L
Cr 267.716†	2462.0	1761.76	71.56%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cu 324.752†	249596.2	35377.75	14.17%	[10]	mg/L
Saturated within auto integration window (code 4)					
Mn 257.610†	3225.8	1401.70	43.45%	[10]	mg/L
Saturated within auto integration window (code 4)					
V 292.402†	138697.0	25356.30	18.28%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/16/2012 8:47:36 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2240434.6	11749.05	0.52%	99.26	%
ScR 361.383	278574.0	2167.99	0.78%	97.43	%
Ag 328.068†	176715.6	981.09	0.56%	[1.0]	mg/L
As 188.979†	18889.0	102.99	0.55%	[10]	mg/L
B 249.677†	78359.9	959.17	1.22%	[10]	mg/L
Be 313.042†	3325157.8	9039.91	0.27%	[5.0]	mg/L
Na 589.592†	637056.8	3225.78	0.51%	[50]	mg/L
Ni 231.604†	41213.5	479.43	1.16%	[10]	mg/L
Pb 220.353†	80014.5	352.48	0.44%	[10]	mg/L
Se 196.026†	14888.7	66.03	0.44%	[10]	mg/L
Sr 421.552†	4683748.6	13846.00	0.30%	[5]	mg/L
Tl 190.801†	25566.5	125.79	0.49%	[10]	mg/L
Zn 206.200†	40539.2	432.89	1.07%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/16/2012 8:50:10 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2284080.4	20514.72	0.90%	101.2	%
ScR 361.383	287209.0	4271.56	1.49%	100.4	%
Mo 202.031†	200666.8	1788.12	0.89%	[10]	mg/L
Sb 206.836†	32698.0	176.84	0.54%	[10]	mg/L
Si 288.158†	21523.3	356.61	1.66%	[10]	mg/L
Sn 189.927†	38978.7	378.05	0.97%	[10]	mg/L
Ti 334.903†	208410.1	4234.27	2.03%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/16/2012 8:52:25 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2129515.1	15926.23	0.75%	94.34	%
ScR 361.383	283261.8	4479.15	1.58%	99.07	%
Al 308.215†	53425.5	1062.08	1.99%	[30]	mg/L
Ca 317.933†	426118.0	3161.77	0.74%	[30]	mg/L
Fe 273.955†	131112.8	857.59	0.65%	[100]	mg/L
K 766.490†	199317.4	2014.88	1.01%	[100]	mg/L
Mg 279.077†	44239.4	880.98	1.99%	[30]	mg/L
Na 330.237†	2873.6	54.15	1.88%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	176700	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1781	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1889	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7836	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	187.4	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	665000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14200	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	3393	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	3636	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	246.2	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	24960	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1311	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1993	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1475	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	322.6	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20070	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12740	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.74	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4121	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8001	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3270	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1489	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2152	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3898	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	936700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	20840	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2557	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	13870	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4054	0.00000	1.000000	

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Analysis Begun

Start Time: 11/16/2012 9:03:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: STD2
Date Collected: 11/16/2012 9:03:34 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2234101.3	25048.88	1.12%	98.98	%
ScR 361.383	281040.0	8376.44	2.98%	98.29	%
Ba 233.527†	45364.6	2015.40	4.44%	[10]	mg/L
Cd 228.802†	316786.9	4140.20	1.31%	[10]	mg/L
Co 228.616†	352595.3	5111.49	1.45%	[10]	mg/L
Cr 267.716†	62110.4	2667.07	4.29%	[10]	mg/L
Cu 324.752†	2600465.7	38628.72	1.49%	[10]	mg/L
Mn 257.610†	361794.3	15460.11	4.27%	[10]	mg/L
V 292.402†	1309618.0	17838.14	1.36%	[10]	mg/L

Analysis Begun

Start Time: 11/16/2012 9:05:19 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 11/16/2012 9:05:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209684.8	97.90	%	0.341				0.35%
ScR 361.383	282108.1	98.66	%	1.030				1.04%
Ag 328.068†	171195.3	0.9690	mg/L	0.00334	0.9690	mg/L	0.00334	0.34%
Al 308.215†	3611.7	1.994	mg/L	0.0285	1.994	mg/L	0.0285	1.43%
As 188.979†	3613.4	1.937	mg/L	0.0091	1.937	mg/L	0.0091	0.47%
B 249.677†	7493.5	0.9554	mg/L	0.00947	0.9554	mg/L	0.00947	0.99%
Ba 233.527†	4623.1	1.019	mg/L	0.0129	1.019	mg/L	0.0129	1.27%
Be 313.042†	622301.4	0.9355	mg/L	0.01462	0.9355	mg/L	0.01462	1.56%
Ca 317.933†	27114.7	1.909	mg/L	0.0255	1.909	mg/L	0.0255	1.34%
Cd 228.802†	32872.5	1.026	mg/L	0.0051	1.026	mg/L	0.0051	0.50%
Co 228.616†	36272.9	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Cr 267.716†	6298.6	1.014	mg/L	0.0094	1.014	mg/L	0.0094	0.93%
Cu 324.752†	260661.1	1.002	mg/L	0.0035	1.002	mg/L	0.0035	0.35%
Fe 273.955†	2632.3	2.001	mg/L	0.0211	2.001	mg/L	0.0211	1.06%
K 766.490†	39267.6	19.70	mg/L	0.308	19.70	mg/L	0.308	1.56%
Mg 279.077†	2926.1	1.992	mg/L	0.0206	1.992	mg/L	0.0206	1.04%
Mn 257.610†	35565.1	0.9834	mg/L	0.01313	0.9834	mg/L	0.01313	1.33%
Mo 202.031†	20424.2	1.018	mg/L	0.0045	1.018	mg/L	0.0045	0.44%
Na 589.592†	619490.6	48.62	mg/L	0.591	48.62	mg/L	0.591	1.22%
Na 330.237†	1485.5	51.60	mg/L	0.574	51.60	mg/L	0.574	1.11%
Ni 231.604†	3941.7	0.9567	mg/L	0.00964	0.9567	mg/L	0.00964	1.01%
Pb 220.353†	15806.7	1.977	mg/L	0.0055	1.977	mg/L	0.0055	0.28%
Sb 206.836†	6859.5	2.097	mg/L	0.0069	2.097	mg/L	0.0069	0.33%
Se 196.026†	2843.4	1.909	mg/L	0.0148	1.909	mg/L	0.0148	0.77%
Si 288.158†	4441.4	2.063	mg/L	0.0250	2.063	mg/L	0.0250	1.21%
Sn 189.927†	3882.0	0.9973	mg/L	0.00242	0.9973	mg/L	0.00242	0.24%
Sr 421.552†	889172.4	0.9492	mg/L	0.01240	0.9492	mg/L	0.01240	1.31%
Ti 334.903†	20989.1	1.006	mg/L	0.0138	1.006	mg/L	0.0138	1.37%
Tl 190.801†	4946.7	1.927	mg/L	0.0082	1.927	mg/L	0.0082	0.42%
V 292.402†	130561.3	1.001	mg/L	0.0042	1.001	mg/L	0.0042	0.42%
Zn 206.200†	3966.6	0.9782	mg/L	0.01019	0.9782	mg/L	0.01019	1.04%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/16/2012 9:09:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2196753.1	97.32	%	0.645				0.66%
ScR 361.383	277079.3	96.90	%	0.596				0.62%
Ag 328.068†	25.3	0.00014	mg/L	0.000119	0.00014	mg/L	0.000119	83.25%
Al 308.215†	11.8	0.00663	mg/L	0.004874	0.00663	mg/L	0.004874	73.52%
As 188.979†	-2.4	-0.00130	mg/L	0.000877	-0.00130	mg/L	0.000877	67.73%
B 249.677†	20.4	0.00260	mg/L	0.000693	0.00260	mg/L	0.000693	26.66%
Ba 233.527†	-1.6	-0.00036	mg/L	0.000345	-0.00036	mg/L	0.000345	96.09%
Be 313.042†	140.9	0.00021	mg/L	0.000063	0.00021	mg/L	0.000063	29.60%
Ca 317.933†	4.1	0.00029	mg/L	0.000613	0.00029	mg/L	0.000613	209.76%
Cd 228.802†	-4.1	-0.00012	mg/L	0.000133	-0.00012	mg/L	0.000133	109.62%
Co 228.616†	-13.1	-0.00037	mg/L	0.000080	-0.00037	mg/L	0.000080	21.59%
Cr 267.716†	-1.9	-0.00030	mg/L	0.000789	-0.00030	mg/L	0.000789	263.58%
Cu 324.752†	73.5	0.00028	mg/L	0.000129	0.00028	mg/L	0.000129	45.76%
Fe 273.955†	2.6	0.00199	mg/L	0.000852	0.00199	mg/L	0.000852	42.89%
K 766.490†	40.7	0.02043	mg/L	0.010112	0.02043	mg/L	0.010112	49.51%
Mg 279.077†	6.7	0.00456	mg/L	0.002283	0.00456	mg/L	0.002283	50.03%
Mn 257.610†	0.2	0.00001	mg/L	0.000163	0.00001	mg/L	0.000163	>999.9%
Mo 202.031†	20.7	0.00103	mg/L	0.000105	0.00103	mg/L	0.000105	10.18%
Na 589.592†	146.5	0.01150	mg/L	0.003439	0.01150	mg/L	0.003439	29.92%
Na 330.237†	-7.5	-0.2613	mg/L	0.47250	-0.2613	mg/L	0.47250	180.80%
Ni 231.604†	-8.7	-0.00212	mg/L	0.001223	-0.00212	mg/L	0.001223	57.68%
Pb 220.353†	3.0	0.00037	mg/L	0.000277	0.00037	mg/L	0.000277	75.11%
Sb 206.836†	7.4	0.00227	mg/L	0.001134	0.00227	mg/L	0.001134	49.84%
Se 196.026†	7.0	0.00472	mg/L	0.002402	0.00472	mg/L	0.002402	50.90%
Si 288.158†	3.5	0.00165	mg/L	0.002627	0.00165	mg/L	0.002627	159.46%
Sn 189.927†	-2.5	-0.00063	mg/L	0.000777	-0.00063	mg/L	0.000777	123.08%
Sr 421.552†	134.3	0.00014	mg/L	0.000071	0.00014	mg/L	0.000071	49.43%
Ti 334.903†	-3.6	-0.00017	mg/L	0.000923	-0.00017	mg/L	0.000923	527.60%
Tl 190.801†	-0.9	-0.00037	mg/L	0.001500	-0.00037	mg/L	0.001500	408.38%
V 292.402†	-13.9	-0.00011	mg/L	0.000253	-0.00011	mg/L	0.000253	236.98%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000096	-0.00012	mg/L	0.000096	80.81%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 9:13:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2216218.3	98.18	%	0.984				1.00%
ScR 361.383	282613.9	98.84	%	1.028				1.04%
Ag 328.068†	537.3	0.00304	mg/L	0.000179	0.00304	mg/L	0.000179	5.90%
Al 308.215†	108.1	0.06056	mg/L	0.008648	0.06056	mg/L	0.008648	14.28%
As 188.979†	87.4	0.04638	mg/L	0.000615	0.04638	mg/L	0.000615	1.33%
B 249.677†	161.3	0.02058	mg/L	0.000219	0.02058	mg/L	0.000219	1.07%
Ba 233.527†	10.4	0.00228	mg/L	0.001457	0.00228	mg/L	0.001457	64.02%
Be 313.042†	676.8	0.00102	mg/L	0.000033	0.00102	mg/L	0.000033	3.26%
Ca 317.933†	680.4	0.04791	mg/L	0.000586	0.04791	mg/L	0.000586	1.22%
Cd 228.802†	68.8	0.00187	mg/L	0.000023	0.00187	mg/L	0.000023	1.24%
Co 228.616†	104.8	0.00296	mg/L	0.000186	0.00296	mg/L	0.000186	6.27%
Cr 267.716†	27.8	0.00447	mg/L	0.000689	0.00447	mg/L	0.000689	15.42%
Cu 324.752†	541.8	0.00208	mg/L	0.000042	0.00208	mg/L	0.000042	2.04%
Fe 273.955†	70.8	0.05399	mg/L	0.001502	0.05399	mg/L	0.001502	2.78%
K 766.490†	998.9	0.5011	mg/L	0.00548	0.5011	mg/L	0.00548	1.09%
Mg 279.077†	80.8	0.05479	mg/L	0.002742	0.05479	mg/L	0.002742	5.00%
Mn 257.610†	31.1	0.00086	mg/L	0.000036	0.00086	mg/L	0.000036	4.23%
Mo 202.031†	104.7	0.00522	mg/L	0.000094	0.00522	mg/L	0.000094	1.80%
Na 589.592†	6003.1	0.4712	mg/L	0.00187	0.4712	mg/L	0.00187	0.40%
Na 330.237†	7.0	0.2434	mg/L	0.08368	0.2434	mg/L	0.08368	34.38%
Ni 231.604†	38.7	0.00941	mg/L	0.000812	0.00941	mg/L	0.000812	8.63%
Pb 220.353†	159.1	0.01990	mg/L	0.000201	0.01990	mg/L	0.000201	1.01%
Sb 206.836†	174.7	0.05345	mg/L	0.001079	0.05345	mg/L	0.001079	2.02%
Se 196.026†	76.9	0.05167	mg/L	0.002389	0.05167	mg/L	0.002389	4.62%
Si 288.158†	139.0	0.06454	mg/L	0.003275	0.06454	mg/L	0.003275	5.07%
Sn 189.927†	32.9	0.00847	mg/L	0.001308	0.00847	mg/L	0.001308	15.43%
Sr 421.552†	944.7	0.00101	mg/L	0.000032	0.00101	mg/L	0.000032	3.17%
Ti 334.903†	115.1	0.00551	mg/L	0.000574	0.00551	mg/L	0.000574	10.41%
Tl 190.801†	123.3	0.04819	mg/L	0.000503	0.04819	mg/L	0.000503	1.04%
V 292.402†	377.1	0.00290	mg/L	0.000117	0.00290	mg/L	0.000117	4.03%
Zn 206.200†	37.8	0.00931	mg/L	0.000286	0.00931	mg/L	0.000286	3.07%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 9:17:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190631.7	97.05	%	0.522				0.54%
ScR 361.383	272122.2	95.17	%	0.790				0.83%
Ag 328.068†	-126.8	-0.00071	mg/L	0.000216	-0.00071	mg/L	0.000216	30.24%
Al 308.215†	354369.7	199.0	mg/L	1.93	199.0	mg/L	1.93	0.97%
As 188.979†	37.4	0.01434	mg/L	0.004842	0.01434	mg/L	0.004842	33.76%
B 249.677†	-4.5	-0.00057	mg/L	0.001157	-0.00057	mg/L	0.001157	201.74%
Ba 233.527†	134.4	-0.00180	mg/L	0.001640	-0.00180	mg/L	0.001640	91.02%
Be 313.042†	120.9	0.00018	mg/L	0.000016	0.00018	mg/L	0.000016	8.99%
Ca 317.933†	1386218.1	97.59	mg/L	1.338	97.59	mg/L	1.338	1.37%
Cd 228.802†	52.6	-0.00030	mg/L	0.000127	-0.00030	mg/L	0.000127	42.56%
Co 228.616†	59.7	-0.00082	mg/L	0.000211	-0.00082	mg/L	0.000211	25.75%
Cr 267.716†	-0.1	-0.00223	mg/L	0.000855	-0.00223	mg/L	0.000855	38.27%
Cu 324.752†	-2019.9	-0.00015	mg/L	0.000123	-0.00015	mg/L	0.000123	83.50%
Fe 273.955†	251658.1	191.9	mg/L	1.82	191.9	mg/L	1.82	0.95%
K 766.490†	15.3	0.00769	mg/L	0.016333	0.00769	mg/L	0.016333	212.48%
Mg 279.077†	151274.0	102.5	mg/L	1.20	102.5	mg/L	1.20	1.17%
Mn 257.610†	20.7	0.00051	mg/L	0.000176	0.00051	mg/L	0.000176	34.16%
Mo 202.031†	46.0	0.00124	mg/L	0.000303	0.00124	mg/L	0.000303	24.42%
Na 589.592†	208.1	0.01633	mg/L	0.001390	0.01633	mg/L	0.001390	8.51%
Na 330.237†	-19.8	-0.6882	mg/L	0.05443	-0.6882	mg/L	0.05443	7.91%
Ni 231.604†	0.5	0.00013	mg/L	0.001338	0.00013	mg/L	0.001338	>999.9%
Pb 220.353†	-300.5	0.00217	mg/L	0.000584	0.00217	mg/L	0.000584	26.90%
Sb 206.836†	25.7	0.00772	mg/L	0.005252	0.00772	mg/L	0.005252	68.05%
Se 196.026†	25.1	0.01686	mg/L	0.002317	0.01686	mg/L	0.002317	13.74%
Si 288.158†	-30.2	-0.00162	mg/L	0.003162	-0.00162	mg/L	0.003162	195.03%
Sn 189.927†	-76.8	-0.00764	mg/L	0.001565	-0.00764	mg/L	0.001565	20.49%
Sr 421.552†	3622.8	0.00387	mg/L Conf.	0.000024	0.00387	mg/L	0.000024	0.61%
Ti 334.903†	152.9	0.00268	mg/L	0.000157	0.00268	mg/L	0.000157	5.86%
Tl 190.801†	-53.8	-0.00056	mg/L	0.002577	-0.00056	mg/L	0.002577	462.75%
V 292.402†	1360.9	0.00368	mg/L	0.000137	0.00368	mg/L	0.000137	3.73%
Zn 206.200†	16.8	0.00414	mg/L	0.000676	0.00414	mg/L	0.000676	16.33%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 9:22:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2190888.4	97.06	%	0.945				0.97%
ScR 361.383	280553.1	98.12	%	1.630				1.66%
Ag 328.068†	174109.6	0.9855	mg/L	0.01251	0.9855	mg/L	0.01251	1.27%
Al 308.215†	345774.5	194.1	mg/L	3.64	194.1	mg/L	3.64	1.87%
As 188.979†	1856.0	0.9764	mg/L	0.00758	0.9764	mg/L	0.00758	0.78%
B 249.677†	4.4	-0.00148	mg/L	0.000384	-0.00148	mg/L	0.000384	25.84%
Ba 233.527†	4703.1	1.005	mg/L	0.0174	1.005	mg/L	0.0174	1.73%
Be 313.042†	621412.9	0.9342	mg/L	0.01515	0.9342	mg/L	0.01515	1.62%
Ca 317.933†	1384278.5	97.46	mg/L	1.849	97.46	mg/L	1.849	1.90%
Cd 228.802†	32640.6	1.023	mg/L	0.0103	1.023	mg/L	0.0103	1.01%
Co 228.616†	35083.8	0.9923	mg/L	0.00677	0.9923	mg/L	0.00677	0.68%
Cr 267.716†	6250.0	1.004	mg/L	0.0188	1.004	mg/L	0.0188	1.87%
Cu 324.752†	264088.7	1.023	mg/L	0.0118	1.023	mg/L	0.0118	1.15%
Fe 273.955†	250591.4	191.1	mg/L	3.79	191.1	mg/L	3.79	1.98%
K 766.490†	-57.9	-0.02907	mg/L	0.026894	-0.02907	mg/L	0.026894	92.50%
Mg 279.077†	144004.0	97.55	mg/L	1.854	97.55	mg/L	1.854	1.90%
Mn 257.610†	34625.5	0.9572	mg/L	0.01844	0.9572	mg/L	0.01844	1.93%
Mo 202.031†	39.2	0.00085	mg/L	0.000259	0.00085	mg/L	0.000259	30.55%
Na 589.592†	393.4	0.03087	mg/L	0.003439	0.03087	mg/L	0.003439	11.14%
Na 330.237†	-6.8	-0.5377	mg/L	0.12445	-0.5377	mg/L	0.12445	23.14%
Ni 231.604†	3861.8	0.9372	mg/L	0.01594	0.9372	mg/L	0.01594	1.70%
Pb 220.353†	7369.5	0.9602	mg/L	0.00787	0.9602	mg/L	0.00787	0.82%
Sb 206.836†	3346.2	1.013	mg/L	0.0073	1.013	mg/L	0.0073	0.72%
Se 196.026†	1441.3	0.9670	mg/L	0.00596	0.9670	mg/L	0.00596	0.62%
Si 288.158†	-35.4	-0.00092	mg/L	0.002202	-0.00092	mg/L	0.002202	238.98%
Sn 189.927†	-78.2	-0.00752	mg/L	0.001086	-0.00752	mg/L	0.001086	14.44%
Sr 421.552†	3451.0	0.00368	mg/L Conf.	0.000068	0.00368	mg/L	0.000068	1.83%
Ti 334.903†	142.2	0.00197	mg/L	0.000354	0.00197	mg/L	0.000354	17.98%
Tl 190.801†	2300.9	0.9111	mg/L	0.00358	0.9111	mg/L	0.00358	0.39%
V 292.402†	128370.6	0.9780	mg/L	0.01111	0.9780	mg/L	0.01111	1.14%
Zn 206.200†	3708.3	0.9147	mg/L	0.01559	0.9147	mg/L	0.01559	1.70%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/16/2012 9:26:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2252340.2	99.79	%	1.267				1.27%
ScR 361.383	280210.0	98.00	%	0.128				0.13%
Ag 328.068†	170394.8	0.9645	mg/L	0.01031	0.9645	mg/L	0.01031	1.07%
Al 308.215†	3796.5	2.098	mg/L	0.0465	2.098	mg/L	0.0465	2.22%
As 188.979†	3624.7	1.943	mg/L	0.0245	1.943	mg/L	0.0245	1.26%
B 249.677†	7600.7	0.9691	mg/L	0.00834	0.9691	mg/L	0.00834	0.86%
Ba 233.527†	4724.9	1.041	mg/L	0.0114	1.041	mg/L	0.0114	1.10%
Be 313.042†	624775.5	0.9393	mg/L	0.00408	0.9393	mg/L	0.00408	0.43%
Ca 317.933†	28107.5	1.979	mg/L	0.0536	1.979	mg/L	0.0536	2.71%
Cd 228.802†	32740.0	1.021	mg/L	0.0096	1.021	mg/L	0.0096	0.94%
Co 228.616†	36281.5	1.027	mg/L	0.0131	1.027	mg/L	0.0131	1.27%
Cr 267.716†	6427.3	1.034	mg/L	0.0105	1.034	mg/L	0.0105	1.01%
Cu 324.752†	257751.3	0.9908	mg/L	0.00855	0.9908	mg/L	0.00855	0.86%
Fe 273.955†	2794.7	2.125	mg/L	0.0446	2.125	mg/L	0.0446	2.10%
K 766.490†	39353.6	19.74	mg/L	0.168	19.74	mg/L	0.168	0.85%
Mg 279.077†	3061.6	2.083	mg/L	0.0247	2.083	mg/L	0.0247	1.19%
Mn 257.610†	35697.7	0.9871	mg/L	0.00445	0.9871	mg/L	0.00445	0.45%
Mo 202.031†	20351.2	1.014	mg/L	0.0141	1.014	mg/L	0.0141	1.39%
Na 589.592†	619955.6	48.66	mg/L	0.090	48.66	mg/L	0.090	0.18%
Na 330.237†	1493.2	51.86	mg/L	0.515	51.86	mg/L	0.515	0.99%
Ni 231.604†	4042.9	0.9813	mg/L	0.00733	0.9813	mg/L	0.00733	0.75%
Pb 220.353†	15832.2	1.980	mg/L	0.0261	1.980	mg/L	0.0261	1.32%
Sb 206.836†	6834.9	2.089	mg/L	0.0285	2.089	mg/L	0.0285	1.36%
Se 196.026†	2852.5	1.915	mg/L	0.0265	1.915	mg/L	0.0265	1.38%
Si 288.158†	4512.2	2.096	mg/L	0.0205	2.096	mg/L	0.0205	0.98%
Sn 189.927†	3879.2	0.9966	mg/L	0.01355	0.9966	mg/L	0.01355	1.36%
Sr 421.552†	887987.9	0.9479	mg/L	0.00441	0.9479	mg/L	0.00441	0.46%
Ti 334.903†	21042.2	1.008	mg/L	0.0048	1.008	mg/L	0.0048	0.48%
Tl 190.801†	4956.3	1.930	mg/L	0.0241	1.930	mg/L	0.0241	1.25%
V 292.402†	130347.7	0.9998	mg/L	0.00944	0.9998	mg/L	0.00944	0.94%
Zn 206.200†	4092.0	1.009	mg/L	0.0091	1.009	mg/L	0.0091	0.90%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/16/2012 9:31:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2213341.6	98.06	%	0.553				0.56%
ScR 361.383	278537.1	97.41	%	0.507				0.52%
Ag 328.068†	10.1	0.00006	mg/L	0.000066	0.00006	mg/L	0.000066	115.23%
Al 308.215†	26.5	0.01485	mg/L	0.007996	0.01485	mg/L	0.007996	53.83%
As 188.979†	-1.6	-0.00086	mg/L	0.000829	-0.00086	mg/L	0.000829	96.37%
B 249.677†	12.2	0.00156	mg/L	0.000945	0.00156	mg/L	0.000945	60.64%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000465	-0.00043	mg/L	0.000465	108.94%
Be 313.042†	124.3	0.00019	mg/L	0.000018	0.00019	mg/L	0.000018	9.73%
Ca 317.933†	76.5	0.00539	mg/L	0.000861	0.00539	mg/L	0.000861	15.99%
Cd 228.802†	-1.5	-0.00004	mg/L	0.000172	-0.00004	mg/L	0.000172	411.16%
Co 228.616†	-18.7	-0.00053	mg/L	0.000066	-0.00053	mg/L	0.000066	12.48%
Cr 267.716†	-10.8	-0.00174	mg/L	0.000634	-0.00174	mg/L	0.000634	36.45%
Cu 324.752†	58.6	0.00023	mg/L	0.000092	0.00023	mg/L	0.000092	40.94%
Fe 273.955†	13.0	0.00995	mg/L	0.000573	0.00995	mg/L	0.000573	5.76%
K 766.490†	16.7	0.00837	mg/L	0.009145	0.00837	mg/L	0.009145	109.22%
Mg 279.077†	12.3	0.00835	mg/L	0.003074	0.00835	mg/L	0.003074	36.82%
Mn 257.610†	-2.6	-0.00007	mg/L	0.000109	-0.00007	mg/L	0.000109	153.26%
Mo 202.031†	18.0	0.00090	mg/L	0.000213	0.00090	mg/L	0.000213	23.74%
Na 589.592†	82.8	0.00650	mg/L	0.004130	0.00650	mg/L	0.004130	63.56%
Na 330.237†	-17.5	-0.6092	mg/L	0.11089	-0.6092	mg/L	0.11089	18.20%
Ni 231.604†	0.3	0.00009	mg/L	0.001926	0.00009	mg/L	0.001926	>999.9%
Pb 220.353†	3.0	0.00038	mg/L	0.001361	0.00038	mg/L	0.001361	359.60%
Sb 206.836†	12.0	0.00368	mg/L	0.000378	0.00368	mg/L	0.000378	10.29%
Se 196.026†	3.9	0.00260	mg/L	0.005079	0.00260	mg/L	0.005079	195.50%
Si 288.158†	0.1	0.00007	mg/L	0.002269	0.00007	mg/L	0.002269	>999.9%
Sn 189.927†	-3.1	-0.00079	mg/L	0.000775	-0.00079	mg/L	0.000775	98.02%
Sr 421.552†	93.8	0.00010	mg/L	0.000004	0.00010	mg/L	0.000004	4.49%
Ti 334.903†	8.6	0.00041	mg/L	0.000041	0.00041	mg/L	0.000041	9.99%
Tl 190.801†	1.1	0.00045	mg/L	0.001014	0.00045	mg/L	0.001014	224.76%
V 292.402†	-22.4	-0.00018	mg/L	0.000205	-0.00018	mg/L	0.000205	114.77%
Zn 206.200†	2.4	0.00060	mg/L	0.000874	0.00060	mg/L	0.000874	145.52%

Sequence No.: 8
Sample ID: VR30 B SWC

Autosampler Location: 304
Date Collected: 11/16/2012 9:36:01 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2266905.1	100.4	%	0.27				0.27%
ScR 361.383	289782.5	101.3	%	1.06				1.04%
Ag 328.068†	-170.5	-0.00091	mg/L	0.000144	-0.00456	mg/L	0.000721	15.82%
Al 308.215†	162648.8	91.33	mg/L	0.923	456.6	mg/L	4.61	1.01%
As 188.979†	43.3	0.06856	mg/L	0.000959	0.3428	mg/L	0.00479	1.40%
B 249.677†	34.4	0.00426	mg/L	0.001057	0.02132	mg/L	0.005286	24.80%
Ba 233.527†	19790.3	4.337	mg/L	0.0357	21.68	mg/L	0.179	0.82%
Be 313.042†	3080.4	0.00458	mg/L	0.000094	0.02288	mg/L	0.000469	2.05%
Ca 317.933†	413333.6	29.10	mg/L	0.312	145.5	mg/L	1.56	1.07%
Cd 228.802†	319.3	0.00847	mg/L	0.000204	0.04236	mg/L	0.001020	2.41%
Co 228.616†	2197.9	0.05672	mg/L	0.000438	0.2836	mg/L	0.00219	0.77%
Cr 267.716†	667.9	0.1104	mg/L	0.00120	0.5520	mg/L	0.00598	1.08%
Cu 324.752†	17950.1	0.07548	mg/L	0.000282	0.3774	mg/L	0.00141	0.37%
Fe 273.955†	207489.5	158.3	mg/L	1.90	791.3	mg/L	9.48	1.20%
K 766.490†	14039.4	7.044	mg/L	0.0813	35.22	mg/L	0.406	1.15%
Mg 279.077†	37594.5	25.41	mg/L	0.284	127.0	mg/L	1.42	1.12%
Mn 257.610†	328609.6	9.083	mg/L	0.1096	45.42	mg/L	0.548	1.21%
Mo 202.031†	90.3	0.00418	mg/L	0.000481	0.02090	mg/L	0.002403	11.49%
Na 589.592†	5621.5	0.4412	mg/L	0.00457	2.206	mg/L	0.0228	1.03%
Na 330.237†	-5.5	-0.07749	mg/L	0.151056	-0.3875	mg/L	0.75528	194.93%
Ni 231.604†	297.6	0.07221	mg/L	0.001673	0.3611	mg/L	0.00836	2.32%
Pb 220.353†	2347.5	0.3088	mg/L	0.00255	1.544	mg/L	0.0127	0.82%
Sb 206.836†	26.8	0.00801	mg/L	0.000467	0.04004	mg/L	0.002333	5.83%
Se 196.026†	16.3	0.01078	mg/L	0.004755	0.05392	mg/L	0.023776	44.10%
Si 288.158†	3340.8	1.555	mg/L	0.0200	7.777	mg/L	0.1001	1.29%
Sn 189.927†	-44.4	-0.00755	mg/L	0.000500	-0.03774	mg/L	0.002499	6.62%
Sr 421.552†	213985.5	0.2284	mg/L	0.00232	1.142	mg/L	0.0116	1.01%
Ti 334.903†	34546.6	1.656	mg/L	0.0190	8.281	mg/L	0.0949	1.15%
Tl 190.801†	-37.1	0.00141	mg/L	0.002325	0.00703	mg/L	0.011623	165.25%
V 292.402†	23994.9	0.1786	mg/L	0.00178	0.8930	mg/L	0.00888	0.99%
Zn 206.200†	3237.8	0.7987	mg/L	0.01198	3.993	mg/L	0.0599	1.50%

Sequence No.: 9
Sample ID: VR30 D SWC

Autosampler Location: 305
Date Collected: 11/16/2012 9:40:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
A11	215.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2278324.3	100.9	%	0.13				0.13%
ScR 361.383	289032.3	101.1	%	0.60				0.59%
Ag 328.068†	-143.4	-0.00077	mg/L	0.000275	-0.00383	mg/L	0.001374	35.87%
Al 308.215†	202390.7	113.6	mg/L	1.13	568.2	mg/L	5.65	1.00%
As 188.979†	-78.3	0.04162	mg/L	0.003479	0.2081	mg/L	0.01740	8.36%
B 249.677†	75.1	0.00950	mg/L	0.000729	0.04749	mg/L	0.003647	7.68%
Ba 233.527†	7044.7	1.538	mg/L	0.0050	7.688	mg/L	0.0248	0.32%
Be 313.042†	2287.1	0.00337	mg/L	0.000038	0.01686	mg/L	0.000188	1.11%
Ca 317.933†	316955.2	22.31	mg/L	0.261	111.6	mg/L	1.31	1.17%
Cd 228.802†	170.4	0.00484	mg/L	0.000162	0.02418	mg/L	0.000811	3.35%
Co 228.616†	1530.3	0.03634	mg/L	0.000259	0.1817	mg/L	0.00130	0.71%
Cr 267.716†	677.4	0.1101	mg/L	0.00083	0.5504	mg/L	0.00414	0.75%
Cu 324.752†	22713.0	0.09068	mg/L	0.000915	0.4534	mg/L	0.00458	1.01%
Fe 273.955†	122919.1	93.75	mg/L	0.757	468.7	mg/L	3.78	0.81%
K 766.490†	10663.0	5.350	mg/L	0.0506	26.75	mg/L	0.253	0.95%
Mg 279.077†	36162.3	24.47	mg/L	0.235	122.4	mg/L	1.17	0.96%
Mn 257.610†	117928.4	3.260	mg/L	0.0282	16.30	mg/L	0.141	0.87%
Mo 202.031†	50.0	0.00224	mg/L	0.000279	0.01122	mg/L	0.001396	12.44%
Na 589.592†	10175.1	0.7986	mg/L	0.00830	3.993	mg/L	0.0415	1.04%
Na 330.237†	-3.2	0.3999	mg/L	0.12593	1.999	mg/L	0.6297	31.49%
Ni 231.604†	374.6	0.09089	mg/L	0.001860	0.4545	mg/L	0.00930	2.05%
Pb 220.353†	2020.7	0.2760	mg/L	0.00190	1.380	mg/L	0.0095	0.69%
Sb 206.836†	4.1	0.00152	mg/L	0.002680	0.00758	mg/L	0.013399	176.83%
Se 196.026†	19.3	0.01286	mg/L	0.003491	0.06428	mg/L	0.017453	27.15%
Si 288.158†	2012.7	0.9381	mg/L	0.00831	4.691	mg/L	0.0416	0.89%
Sn 189.927†	-35.4	-0.00589	mg/L	0.000936	-0.02943	mg/L	0.004678	15.90%
Sr 421.552†	256275.4	0.2736	mg/L	0.00281	1.368	mg/L	0.0140	1.03%
Ti 334.903†	61510.5	2.950	mg/L	0.0262	14.75	mg/L	0.131	0.89%
Tl 190.801†	-15.9	0.00298	mg/L	0.001542	0.01491	mg/L	0.007708	51.69%
V 292.402†	20627.2	0.1535	mg/L	0.00173	0.7677	mg/L	0.00863	1.12%
Zn 206.200†	1977.1	0.4877	mg/L	0.00234	2.439	mg/L	0.0117	0.48%

Sequence No.: 10
Sample ID: VR30 E SWC

Autosampler Location: 306
Date Collected: 11/16/2012 9:44:05 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311384.2	102.4	%	0.49				0.48%
ScR 361.383	292296.6	102.2	%	0.90				0.88%
Ag 328.068†	-158.6	-0.00084	mg/L	0.000344	-0.00421	mg/L	0.001718	40.78%
Al 308.215†	240475.3	135.0	mg/L	1.32	675.1	mg/L	6.59	0.98%
As 188.979†	-127.2	0.03169	mg/L	0.002950	0.1585	mg/L	0.01475	9.31%
B 249.677†	62.6	0.00788	mg/L	0.000863	0.03942	mg/L	0.004317	10.95%
Ba 233.527†	6971.3	1.519	mg/L	0.0137	7.594	mg/L	0.0685	0.90%
Be 313.042†	2594.1	0.00382	mg/L	0.000047	0.01910	mg/L	0.000233	1.22%
Ca 317.933†	218878.8	15.41	mg/L	0.157	77.05	mg/L	0.783	1.02%
Cd 228.802†	63.8	0.00150	mg/L	0.000182	0.00749	mg/L	0.000908	12.12%
Co 228.616†	1830.0	0.04358	mg/L	0.000563	0.2179	mg/L	0.00281	1.29%
Cr 267.716†	708.5	0.1157	mg/L	0.00192	0.5784	mg/L	0.00958	1.66%
Cu 324.752†	26515.0	0.1059	mg/L	0.00110	0.5294	mg/L	0.00550	1.04%
Fe 273.955†	143936.1	109.8	mg/L	1.24	548.9	mg/L	6.21	1.13%
K 766.490†	11246.5	5.643	mg/L	0.0386	28.21	mg/L	0.193	0.68%
Mg 279.077†	39859.6	26.97	mg/L	0.262	134.9	mg/L	1.31	0.97%
Mn 257.610†	62486.0	1.727	mg/L	0.0192	8.635	mg/L	0.0959	1.11%
Mo 202.031†	31.2	0.00138	mg/L	0.000182	0.00692	mg/L	0.000908	13.12%
Na 589.592†	12027.3	0.9440	mg/L	0.01222	4.720	mg/L	0.0611	1.29%
Na 330.237†	-8.2	0.3827	mg/L	0.17400	1.913	mg/L	0.8700	45.47%
Ni 231.604†	417.3	0.1013	mg/L	0.00226	0.5063	mg/L	0.01128	2.23%
Pb 220.353†	422.7	0.08070	mg/L	0.000817	0.4035	mg/L	0.00408	1.01%
Sb 206.836†	4.8	0.00203	mg/L	0.002279	0.01013	mg/L	0.011394	112.52%
Se 196.026†	22.1	0.01469	mg/L	0.002003	0.07343	mg/L	0.010016	13.64%
Si 288.158†	1514.3	0.7069	mg/L	0.00805	3.534	mg/L	0.0403	1.14%
Sn 189.927†	-30.3	-0.00535	mg/L	0.000385	-0.02676	mg/L	0.001923	7.19%
Sr 421.552†	164339.3	0.1754	mg/L	0.00187	0.8772	mg/L	0.00933	1.06%
Ti 334.903†	72845.9	3.495	mg/L	0.0345	17.47	mg/L	0.172	0.99%
Tl 190.801†	-27.4	0.00002	mg/L	0.002025	0.00012	mg/L	0.010127	>999.9%
V 292.402†	24789.3	0.1842	mg/L	0.00209	0.9212	mg/L	0.01046	1.14%
Zn 206.200†	1558.1	0.3843	mg/L	0.00293	1.922	mg/L	0.0147	0.76%

Sequence No.: 11
Sample ID: VR30 F SWC

Autosampler Location: 307
Date Collected: 11/16/2012 9:48:06 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2335671.1	103.5	%	0.57				0.56%
ScR 361.383	295425.7	103.3	%	0.36				0.35%
Ag 328.068†	-123.7	-0.00065	mg/L	0.000122	-0.00325	mg/L	0.000608	18.72%
Al 308.215†	243146.9	136.5	mg/L	1.55	682.6	mg/L	7.75	1.14%
As 188.979†	-124.0	0.03516	mg/L	0.003806	0.1758	mg/L	0.01903	10.83%
B 249.677†	52.3	0.00658	mg/L	0.000314	0.03288	mg/L	0.001572	4.78%
Ba 233.527†	5947.7	1.294	mg/L	0.0080	6.468	mg/L	0.0399	0.62%
Be 313.042†	2624.1	0.00387	mg/L	0.000009	0.01934	mg/L	0.000043	0.22%
Ca 317.933†	198838.3	14.00	mg/L	0.147	69.99	mg/L	0.734	1.05%
Cd 228.802†	65.4	0.00157	mg/L	0.000171	0.00786	mg/L	0.000854	10.85%
Co 228.616†	1760.4	0.04156	mg/L	0.000875	0.2078	mg/L	0.00438	2.11%
Cr 267.716†	714.1	0.1165	mg/L	0.00089	0.5825	mg/L	0.00445	0.76%
Cu 324.752†	28865.0	0.1147	mg/L	0.00267	0.5737	mg/L	0.01336	2.33%
Fe 273.955†	139042.8	106.0	mg/L	0.68	530.2	mg/L	3.39	0.64%
K 766.490†	11233.6	5.636	mg/L	0.0632	28.18	mg/L	0.316	1.12%
Mg 279.077†	38352.7	25.95	mg/L	0.216	129.8	mg/L	1.08	0.83%
Mn 257.610†	73481.2	2.031	mg/L	0.0163	10.15	mg/L	0.081	0.80%
Mo 202.031†	25.7	0.00113	mg/L	0.000660	0.00563	mg/L	0.003301	58.66%
Na 589.592†	12361.3	0.9702	mg/L	0.01292	4.851	mg/L	0.0646	1.33%
Na 330.237†	-3.6	0.5544	mg/L	0.07014	2.772	mg/L	0.3507	12.65%
Ni 231.604†	416.3	0.1010	mg/L	0.00188	0.5051	mg/L	0.00939	1.86%
Pb 220.353†	313.0	0.06748	mg/L	0.001074	0.3374	mg/L	0.00537	1.59%
Sb 206.836†	5.3	0.00213	mg/L	0.001072	0.01064	mg/L	0.005358	50.35%
Se 196.026†	22.5	0.01499	mg/L	0.004442	0.07497	mg/L	0.022212	29.63%
Si 288.158†	1302.0	0.6081	mg/L	0.00665	3.041	mg/L	0.0333	1.09%
Sn 189.927†	-26.8	-0.00464	mg/L	0.001177	-0.02322	mg/L	0.005884	25.34%
Sr 421.552†	170535.5	0.1821	mg/L	0.00217	0.9103	mg/L	0.01084	1.19%
Ti 334.903†	74072.0	3.553	mg/L	0.0371	17.77	mg/L	0.186	1.04%
Tl 190.801†	-24.7	0.00076	mg/L	0.002734	0.00382	mg/L	0.013671	358.34%
V 292.402†	22669.5	0.1682	mg/L	0.00328	0.8410	mg/L	0.01640	1.95%
Zn 206.200†	1583.3	0.3905	mg/L	0.00192	1.953	mg/L	0.0096	0.49%

Sequence No.: 12
Sample ID: VR30 G SWC

Autosampler Location: 308
Date Collected: 11/16/2012 9:52:07 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282264.3	101.1	%	0.28				0.28%
ScR 361.383	294092.7	102.9	%	1.17				1.14%
Ag 328.068†	154.9	0.00093	mg/L	0.000133	0.00466	mg/L	0.000666	14.28%
Al 308.215†	259195.3	145.5	mg/L	1.35	727.7	mg/L	6.77	0.93%
As 188.979†	-133.3	0.03835	mg/L	0.001463	0.1917	mg/L	0.00732	3.82%
B 249.677†	54.6	0.00686	mg/L	0.000813	0.03428	mg/L	0.004063	11.85%
Ba 233.527†	5452.1	1.183	mg/L	0.0098	5.917	mg/L	0.0489	0.83%
Be 313.042†	2750.3	0.00405	mg/L	0.000054	0.02025	mg/L	0.000272	1.35%
Ca 317.933†	226126.0	15.92	mg/L	0.151	79.60	mg/L	0.757	0.95%
Cd 228.802†	57.1	0.00130	mg/L	0.000018	0.00649	mg/L	0.000091	1.40%
Co 228.616†	1882.9	0.04439	mg/L	0.000381	0.2220	mg/L	0.00191	0.86%
Cr 267.716†	1027.6	0.1670	mg/L	0.00182	0.8349	mg/L	0.00912	1.09%
Cu 324.752†	39506.5	0.1559	mg/L	0.00068	0.7794	mg/L	0.00342	0.44%
Fe 273.955†	147721.2	112.7	mg/L	0.84	563.3	mg/L	4.18	0.74%
K 766.490†	11750.0	5.895	mg/L	0.0618	29.48	mg/L	0.309	1.05%
Mg 279.077†	42799.3	28.96	mg/L	0.258	144.8	mg/L	1.29	0.89%
Mn 257.610†	66779.2	1.846	mg/L	0.0135	9.229	mg/L	0.0674	0.73%
Mo 202.031†	34.3	0.00153	mg/L	0.000201	0.00764	mg/L	0.001004	13.14%
Na 589.592†	14629.0	1.148	mg/L	0.0103	5.741	mg/L	0.0517	0.90%
Na 330.237†	-4.2	0.6052	mg/L	0.01543	3.026	mg/L	0.0771	2.55%
Ni 231.604†	502.6	0.1220	mg/L	0.00241	0.6098	mg/L	0.01207	1.98%
Pb 220.353†	408.1	0.08130	mg/L	0.001102	0.4065	mg/L	0.00551	1.36%
Sb 206.836†	5.5	0.00165	mg/L	0.002497	0.00823	mg/L	0.012483	151.72%
Se 196.026†	33.0	0.02201	mg/L	0.004233	0.1100	mg/L	0.02116	19.23%
Si 288.158†	1008.6	0.4721	mg/L	0.00726	2.361	mg/L	0.0363	1.54%
Sn 189.927†	-35.7	-0.00664	mg/L	0.000881	-0.03319	mg/L	0.004404	13.27%
Sr 421.552†	198112.6	0.2115	mg/L	0.00183	1.057	mg/L	0.0092	0.87%
Ti 334.903†	80106.7	3.843	mg/L	0.0309	19.21	mg/L	0.154	0.80%
Tl 190.801†	-34.4	-0.00245	mg/L	0.003700	-0.01226	mg/L	0.018500	150.95%
V 292.402†	25520.1	0.1898	mg/L	0.00102	0.9488	mg/L	0.00509	0.54%
Zn 206.200†	1509.9	0.3724	mg/L	0.00300	1.862	mg/L	0.0150	0.81%

Sequence No.: 13
Sample ID: VR30 H SWC

Autosampler Location: 309
Date Collected: 11/16/2012 9:56:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2304118.0	102.1	%	0.36				0.35%
ScR 361.383	292173.5	102.2	%	0.43				0.42%
Ag 328.068†	-26.8	-0.00011	mg/L	0.000153	-0.00056	mg/L	0.000767	137.32%
Al 308.215†	182483.0	102.5	mg/L	0.90	512.3	mg/L	4.51	0.88%
As 188.979†	-86.8	0.03301	mg/L	0.003044	0.1651	mg/L	0.01522	9.22%
B 249.677†	56.6	0.00714	mg/L	0.000636	0.03572	mg/L	0.003182	8.91%
Ba 233.527†	8522.4	1.865	mg/L	0.0101	9.324	mg/L	0.0507	0.54%
Be 313.042†	1982.1	0.00292	mg/L	0.000037	0.01460	mg/L	0.000184	1.26%
Ca 317.933†	200605.4	14.12	mg/L	0.067	70.62	mg/L	0.337	0.48%
Cd 228.802†	142.9	0.00408	mg/L	0.000100	0.02041	mg/L	0.000498	2.44%
Co 228.616†	1380.0	0.03248	mg/L	0.000055	0.1624	mg/L	0.00027	0.17%
Cr 267.716†	619.7	0.1012	mg/L	0.00056	0.5058	mg/L	0.00278	0.55%
Cu 324.752†	14634.6	0.05931	mg/L	0.000195	0.2966	mg/L	0.00098	0.33%
Fe 273.955†	111084.1	84.72	mg/L	0.895	423.6	mg/L	4.47	1.06%
K 766.490†	11432.8	5.736	mg/L	0.0169	28.68	mg/L	0.085	0.30%
Mg 279.077†	24568.5	16.62	mg/L	0.121	83.08	mg/L	0.606	0.73%
Mn 257.610†	126564.1	3.498	mg/L	0.0331	17.49	mg/L	0.166	0.95%
Mo 202.031†	36.8	0.00168	mg/L	0.000151	0.00839	mg/L	0.000757	9.02%
Na 589.592†	9746.1	0.7649	mg/L	0.00707	3.825	mg/L	0.0354	0.92%
Na 330.237†	-3.3	0.3435	mg/L	0.17601	1.717	mg/L	0.8801	51.25%
Ni 231.604†	365.8	0.08876	mg/L	0.001396	0.4438	mg/L	0.00698	1.57%
Pb 220.353†	1019.0	0.1485	mg/L	0.00129	0.7425	mg/L	0.00646	0.87%
Sb 206.836†	7.4	0.00251	mg/L	0.001512	0.01254	mg/L	0.007558	60.27%
Se 196.026†	17.1	0.01136	mg/L	0.000712	0.05681	mg/L	0.003560	6.27%
Si 288.158†	3243.5	1.509	mg/L	0.0108	7.545	mg/L	0.0539	0.71%
Sn 189.927†	-29.3	-0.00536	mg/L	0.000912	-0.02682	mg/L	0.004560	17.01%
Sr 421.552†	164364.3	0.1755	mg/L	0.00133	0.8773	mg/L	0.00665	0.76%
Ti 334.903†	58175.4	2.791	mg/L	0.0237	13.95	mg/L	0.119	0.85%
Tl 190.801†	-17.9	0.00134	mg/L	0.000928	0.00671	mg/L	0.004642	69.21%
V 292.402†	18134.9	0.1349	mg/L	0.00040	0.6745	mg/L	0.00200	0.30%
Zn 206.200†	2160.2	0.5329	mg/L	0.00349	2.664	mg/L	0.0174	0.65%

Sequence No.: 14
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 11/16/2012 10:00:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2211042.3	97.96	%	0.069				0.07%
ScR 361.383	281425.6	98.42	%	1.154				1.17%
Ag 328.068†	174051.3	0.9852	mg/L	0.00100	0.9852	mg/L	0.00100	0.10%
Al 308.215†	3696.9	2.041	mg/L	0.0284	2.041	mg/L	0.0284	1.39%
As 188.979†	3657.6	1.961	mg/L	0.0138	1.961	mg/L	0.0138	0.70%
B 249.677†	7567.5	0.9649	mg/L	0.01213	0.9649	mg/L	0.01213	1.26%
Ba 233.527†	4721.2	1.040	mg/L	0.0139	1.040	mg/L	0.0139	1.34%
Be 313.042†	626887.5	0.9424	mg/L	0.00875	0.9424	mg/L	0.00875	0.93%
Ca 317.933†	27675.8	1.948	mg/L	0.0181	1.948	mg/L	0.0181	0.93%
Cd 228.802†	33109.2	1.033	mg/L	0.0016	1.033	mg/L	0.0016	0.15%
Co 228.616†	35891.2	1.016	mg/L	0.0028	1.016	mg/L	0.0028	0.27%
Cr 267.716†	6399.9	1.030	mg/L	0.0131	1.030	mg/L	0.0131	1.27%
Cu 324.752†	262871.7	1.010	mg/L	0.0029	1.010	mg/L	0.0029	0.29%
Fe 273.955†	2689.1	2.044	mg/L	0.0153	2.044	mg/L	0.0153	0.75%
K 766.490†	39762.4	19.95	mg/L	0.215	19.95	mg/L	0.215	1.08%
Mg 279.077†	3000.3	2.042	mg/L	0.0213	2.042	mg/L	0.0213	1.04%
Mn 257.610†	35687.8	0.9868	mg/L	0.00584	0.9868	mg/L	0.00584	0.59%
Mo 202.031†	20686.3	1.031	mg/L	0.0051	1.031	mg/L	0.0051	0.50%
Na 589.592†	624588.1	49.02	mg/L	0.566	49.02	mg/L	0.566	1.16%
Na 330.237†	1491.7	51.81	mg/L	0.515	51.81	mg/L	0.515	0.99%
Ni 231.604†	4026.4	0.9773	mg/L	0.01189	0.9773	mg/L	0.01189	1.22%
Pb 220.353†	16046.0	2.006	mg/L	0.0116	2.006	mg/L	0.0116	0.58%
Sb 206.836†	6936.1	2.120	mg/L	0.0113	2.120	mg/L	0.0113	0.53%
Se 196.026†	2873.6	1.929	mg/L	0.0077	1.929	mg/L	0.0077	0.40%
Si 288.158†	4492.6	2.087	mg/L	0.0245	2.087	mg/L	0.0245	1.17%
Sn 189.927†	3917.5	1.006	mg/L	0.0067	1.006	mg/L	0.0067	0.67%
Sr 421.552†	893900.0	0.9543	mg/L	0.00885	0.9543	mg/L	0.00885	0.93%
Ti 334.903†	21172.9	1.015	mg/L	0.0086	1.015	mg/L	0.0086	0.85%
Tl 190.801†	5037.5	1.962	mg/L	0.0100	1.962	mg/L	0.0100	0.51%
V 292.402†	132402.6	1.016	mg/L	0.0017	1.016	mg/L	0.0017	0.16%
Zn 206.200†	4049.1	0.9986	mg/L	0.00989	0.9986	mg/L	0.00989	0.99%

Sequence No.: 15
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/16/2012 10:05:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2265302.0	100.4	%	0.82				0.82%
ScR 361.383	286386.1	100.2	%	1.19				1.19%
Ag 328.068†	43.5	0.00025	mg/L	0.000120	0.00025	mg/L	0.000120	48.67%
Al 308.215†	21.7	0.01219	mg/L	0.007834	0.01219	mg/L	0.007834	64.25%
As 188.979†	0.3	0.00019	mg/L	0.000600	0.00019	mg/L	0.000600	312.17%
B 249.677†	12.0	0.00153	mg/L	0.000504	0.00153	mg/L	0.000504	32.86%
Ba 233.527†	-1.7	-0.00038	mg/L	0.000659	-0.00038	mg/L	0.000659	173.90%
Be 313.042†	64.0	0.00010	mg/L	0.000019	0.00010	mg/L	0.000019	19.48%
Ca 317.933†	16.5	0.00116	mg/L	0.000843	0.00116	mg/L	0.000843	72.42%
Cd 228.802†	-8.9	-0.00028	mg/L	0.000164	-0.00028	mg/L	0.000164	58.05%
Co 228.616†	-15.4	-0.00044	mg/L	0.000071	-0.00044	mg/L	0.000071	16.37%
Cr 267.716†	-8.6	-0.00139	mg/L	0.000844	-0.00139	mg/L	0.000844	60.74%
Cu 324.752†	68.6	0.00026	mg/L	0.000163	0.00026	mg/L	0.000163	61.90%
Fe 273.955†	5.6	0.00430	mg/L	0.000901	0.00430	mg/L	0.000901	20.97%
K 766.490†	18.2	0.00913	mg/L	0.009749	0.00913	mg/L	0.009749	106.78%
Mg 279.077†	0.3	0.00020	mg/L	0.005138	0.00020	mg/L	0.005138	>999.9%
Mn 257.610†	-7.6	-0.00021	mg/L	0.000032	-0.00021	mg/L	0.000032	15.24%
Mo 202.031†	19.2	0.00096	mg/L	0.000202	0.00096	mg/L	0.000202	21.17%
Na 589.592†	39.1	0.00307	mg/L	0.003488	0.00307	mg/L	0.003488	113.79%
Na 330.237†	-5.3	-0.1843	mg/L	0.30022	-0.1843	mg/L	0.30022	162.93%
Ni 231.604†	-1.2	-0.00029	mg/L	0.000758	-0.00029	mg/L	0.000758	263.29%
Pb 220.353†	-0.0	-0.00000	mg/L	0.000645	-0.00000	mg/L	0.000645	>999.9%
Sb 206.836†	5.6	0.00173	mg/L	0.000288	0.00173	mg/L	0.000288	16.60%
Se 196.026†	5.5	0.00369	mg/L	0.002885	0.00369	mg/L	0.002885	78.20%
Si 288.158†	-4.6	-0.00215	mg/L	0.000930	-0.00215	mg/L	0.000930	43.21%
Sn 189.927†	-0.1	-0.00004	mg/L	0.000153	-0.00004	mg/L	0.000153	422.92%
Sr 421.552†	74.2	0.00008	mg/L	0.000064	0.00008	mg/L	0.000064	81.28%
Ti 334.903†	13.8	0.00066	mg/L	0.000293	0.00066	mg/L	0.000293	44.17%
Tl 190.801†	3.8	0.00148	mg/L	0.002469	0.00148	mg/L	0.002469	166.41%
V 292.402†	-13.7	-0.00011	mg/L	0.000165	-0.00011	mg/L	0.000165	148.94%
Zn 206.200†	0.1	0.00001	mg/L	0.000819	0.00001	mg/L	0.000819	>999.9%

Sequence No.: 16
Sample ID: VR32 A-L SWC

Autosampler Location: 310
Date Collected: 11/16/2012 10:09:17 AM
Data Type: Original

Dilution: ~~5.000000X~~
25 BA 11/16/12

Nebulizer Parameters: VR32 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263964.5	100.3	%	1.16				1.16%
ScR 361.383	289102.2	101.1	%	1.21				1.20%
Ag 328.068†	1.8	0.00002	mg/L	0.000139	0.00009	mg/L	0.000697	766.84%
Al 308.215†	35071.1	19.69	mg/L	0.251	98.46	mg/L	1.256	1.28%
As 188.979†	-6.8	0.01278	mg/L	0.001588	0.06388	mg/L	0.007941	12.43%
B 249.677†	16.0	0.00202	mg/L	0.000804	0.01011	mg/L	0.004018	39.73%
Ba 233.527†	1517.2	0.3312	mg/L	0.00507	1.656	mg/L	0.0253	1.53%
Be 313.042†	477.1	0.00070	mg/L	0.000016	0.00352	mg/L	0.000078	2.20%
Ca 317.933†	53929.3	3.797	mg/L	0.0476	18.98	mg/L	0.238	1.25%
Cd 228.802†	51.9	0.00150	mg/L	0.000067	0.00748	mg/L	0.000336	4.49%
Co 228.616†	318.2	0.00762	mg/L	0.000172	0.03808	mg/L	0.000858	2.25%
Cr 267.716†	172.9	0.02808	mg/L	0.000513	0.1404	mg/L	0.00257	1.83%
Cu 324.752†	3757.1	0.01517	mg/L	0.000277	0.07583	mg/L	0.001386	1.83%
Fe 273.955†	25985.8	19.82	mg/L	0.298	99.10	mg/L	1.488	1.50%
K 766.490†	3537.6	1.775	mg/L	0.0078	8.874	mg/L	0.0392	0.44%
Mg 279.077†	6835.6	4.625	mg/L	0.0727	23.12	mg/L	0.364	1.57%
Mn 257.610†	34973.5	0.9667	mg/L	0.01391	4.833	mg/L	0.0696	1.44%
Mo 202.031†	14.8	0.00069	mg/L	0.000185	0.00347	mg/L	0.000926	26.67%
Na 589.592†	2333.0	0.1831	mg/L	0.00242	0.9156	mg/L	0.01208	1.32%
Na 330.237†	-7.3	-0.1758	mg/L	0.12318	-0.8792	mg/L	0.61592	70.05%
Ni 231.604†	106.2	0.02576	mg/L	0.001486	0.1288	mg/L	0.00743	5.77%
Pb 220.353†	344.1	0.04693	mg/L	0.000479	0.2346	mg/L	0.00240	1.02%
Sb 206.836†	2.8	0.00079	mg/L	0.002290	0.00394	mg/L	0.011451	290.68%
Se 196.026†	7.5	0.00503	mg/L	0.000195	0.02515	mg/L	0.000974	3.87%
Si 288.158†	610.3	0.2842	mg/L	0.00735	1.421	mg/L	0.0367	2.59%
Sn 189.927†	-15.2	-0.00333	mg/L	0.000876	-0.01667	mg/L	0.004380	26.27%
Sr 421.552†	49479.6	0.05282	mg/L	0.000685	0.2641	mg/L	0.00343	1.30%
Ti 334.903†	12091.4	0.5800	mg/L	0.00664	2.900	mg/L	0.0332	1.14%
Tl 190.801†	-4.1	0.00038	mg/L	0.001668	0.00189	mg/L	0.008338	442.25%
V 292.402†	3634.0	0.02700	mg/L	0.000188	0.1350	mg/L	0.00094	0.70%
Zn 206.200†	643.0	0.1586	mg/L	0.00272	0.7930	mg/L	0.01358	1.71%

Sequence No.: 17
Sample ID: VR32 A SWC

Autosampler Location: 311
Date Collected: 11/16/2012 10:13:18 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2294229.4	101.6	%	0.46				0.45%
ScR 361.383	295890.1	103.5	%	0.43				0.41%
Ag 328.068†	-156.2	-0.00084	mg/L	0.000165	-0.00422	mg/L	0.000823	19.50%
Al 308.215†	177445.1	99.63	mg/L	0.360	498.2	mg/L	1.80	0.36%
As 188.979†	-27.6	0.06704	mg/L	0.003549	0.3352	mg/L	0.01774	5.29%
B 249.677†	73.7	0.00931	mg/L	0.000509	0.04654	mg/L	0.002545	5.47%
Ba 233.527†	7580.0	1.654	mg/L	0.0060	8.272	mg/L	0.0300	0.36%
Be 313.042†	2081.1	0.00307	mg/L	0.000006	0.01533	mg/L	0.000032	0.21%
Ca 317.933†	274913.4	19.35	mg/L	0.161	96.77	mg/L	0.804	0.83%
Cd 228.802†	304.1	0.00885	mg/L	0.000145	0.04426	mg/L	0.000726	1.64%
Co 228.616†	1656.8	0.03993	mg/L	0.000312	0.1997	mg/L	0.00156	0.78%
Cr 267.716†	870.7	0.1414	mg/L	0.00064	0.7071	mg/L	0.00321	0.45%
Cu 324.752†	18754.4	0.07576	mg/L	0.000979	0.3788	mg/L	0.00489	1.29%
Fe 273.955†	131271.6	100.1	mg/L	0.52	500.6	mg/L	2.62	0.52%
K 766.490†	17547.5	8.804	mg/L	0.0319	44.02	mg/L	0.159	0.36%
Mg 279.077†	34216.1	23.15	mg/L	0.098	115.7	mg/L	0.49	0.42%
Mn 257.610†	176776.0	4.886	mg/L	0.0265	24.43	mg/L	0.133	0.54%
Mo 202.031†	68.0	0.00317	mg/L	0.000211	0.01585	mg/L	0.001055	6.65%
Na 589.592†	11555.3	0.9069	mg/L	0.00610	4.535	mg/L	0.0305	0.67%
Na 330.237†	4.8	0.5629	mg/L	0.15697	2.815	mg/L	0.7848	27.88%
Ni 231.604†	518.2	0.1257	mg/L	0.00069	0.6287	mg/L	0.00343	0.55%
Pb 220.353†	1721.2	0.2350	mg/L	0.00049	1.175	mg/L	0.0024	0.21%
Sb 206.836†	16.5	0.00474	mg/L	0.001568	0.02368	mg/L	0.007839	33.10%
Se 196.026†	20.0	0.01335	mg/L	0.003491	0.06677	mg/L	0.017455	26.14%
Si 288.158†	2923.8	1.361	mg/L	0.0023	6.807	mg/L	0.0114	0.17%
Sn 189.927†	-36.0	-0.00641	mg/L	0.000870	-0.03203	mg/L	0.004351	13.58%
Sr 421.552†	246355.3	0.2630	mg/L	0.00116	1.315	mg/L	0.0058	0.44%
Ti 334.903†	60402.7	2.897	mg/L	0.0140	14.49	mg/L	0.070	0.48%
Tl 190.801†	-24.7	0.00025	mg/L	0.001048	0.00123	mg/L	0.005241	425.28%
V 292.402†	18226.2	0.1354	mg/L	0.00162	0.6769	mg/L	0.00811	1.20%
Zn 206.200†	3230.5	0.7969	mg/L	0.00316	3.984	mg/L	0.0158	0.40%

Sequence No.: 18
Sample ID: VR32 ADUP SWC

Autosampler Location: 312
Date Collected: 11/16/2012 10:17:19 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ADUP SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2258859.7	100.1	%	0.74				0.74%
ScR 361.383	291427.6	101.9	%	0.98				0.96%
Ag 328.068†	-180.6	-0.00098	mg/L	0.000168	-0.00490	mg/L	0.000841	17.17%
Al 308.215†	185344.6	104.1	mg/L	2.26	520.3	mg/L	11.32	2.18%
As 188.979†	-35.8	0.06971	mg/L	0.002642	0.3486	mg/L	0.01321	3.79%
B 249.677†	84.4	0.01068	mg/L	0.000531	0.05338	mg/L	0.002653	4.97%
Ba 233.527†	7849.4	1.713	mg/L	0.0148	8.565	mg/L	0.0740	0.86%
Be 313.042†	2146.5	0.00316	mg/L	0.000038	0.01580	mg/L	0.000190	1.21%
Ca 317.933†	297797.0	20.97	mg/L	0.486	104.8	mg/L	2.43	2.32%
Cd 228.802†	308.7	0.00898	mg/L	0.000333	0.04492	mg/L	0.001666	3.71%
Co 228.616†	1688.0	0.04027	mg/L	0.000520	0.2013	mg/L	0.00260	1.29%
Cr 267.716†	859.6	0.1398	mg/L	0.00211	0.6990	mg/L	0.01053	1.51%
Cu 324.752†	21237.5	0.08548	mg/L	0.000181	0.4274	mg/L	0.00090	0.21%
Fe 273.955†	138096.9	105.3	mg/L	2.40	526.6	mg/L	11.98	2.27%
K 766.490†	18920.4	9.493	mg/L	0.2101	47.46	mg/L	1.051	2.21%
Mg 279.077†	35088.2	23.74	mg/L	0.528	118.7	mg/L	2.64	2.22%
Mn 257.610†	173937.9	4.808	mg/L	0.1119	24.04	mg/L	0.560	2.33%
Mo 202.031†	73.3	0.00342	mg/L	0.000123	0.01708	mg/L	0.000616	3.61%
Na 589.592†	12184.0	0.9563	mg/L	0.01839	4.781	mg/L	0.0920	1.92%
Na 330.237†	5.5	0.6358	mg/L	0.14328	3.179	mg/L	0.7164	22.54%
Ni 231.604†	548.6	0.1331	mg/L	0.00071	0.6656	mg/L	0.00357	0.54%
Pb 220.353†	1770.7	0.2420	mg/L	0.00142	1.210	mg/L	0.0071	0.59%
Sb 206.836†	11.0	0.00323	mg/L	0.003166	0.01614	mg/L	0.015831	98.11%
Se 196.026†	18.3	0.01221	mg/L	0.003090	0.06103	mg/L	0.015451	25.32%
Si 288.158†	2258.9	1.052	mg/L	0.0106	5.262	mg/L	0.0528	1.00%
Sn 189.927†	-41.6	-0.00763	mg/L	0.000700	-0.03814	mg/L	0.003502	9.18%
Sr 421.552†	273751.5	0.2922	mg/L	0.00604	1.461	mg/L	0.0302	2.07%
Ti 334.903†	65590.3	3.146	mg/L	0.0704	15.73	mg/L	0.352	2.24%
Tl 190.801†	-25.2	0.00060	mg/L	0.001117	0.00300	mg/L	0.005586	186.48%
V 292.402†	19485.2	0.1447	mg/L	0.00087	0.7233	mg/L	0.00437	0.60%
Zn 206.200†	3337.0	0.8232	mg/L	0.00465	4.116	mg/L	0.0232	0.56%

Sequence No.: 19
Sample ID: VR32 ASPK SWC

Autosampler Location: 313
Date Collected: 11/16/2012 10:21:20 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2267775.0	100.5	%	0.74				0.74%
ScR 361.383	288152.1	100.8	%	0.99				0.99%
Ag 328.068†	35393.3	0.2004	mg/L	0.00195	1.002	mg/L	0.0098	0.97%
Al 308.215†	185558.0	104.2	mg/L	0.86	520.9	mg/L	4.28	0.82%
As 188.979†	1450.8	0.8573	mg/L	0.00259	4.286	mg/L	0.0129	0.30%
B 249.677†	95.2	0.01162	mg/L	0.001174	0.05810	mg/L	0.005871	10.10%
Ba 233.527†	11720.8	2.566	mg/L	0.0301	12.83	mg/L	0.150	1.17%
Be 313.042†	133048.2	0.2000	mg/L	0.00124	0.9998	mg/L	0.00622	0.62%
Ca 317.933†	407610.2	28.70	mg/L	0.227	143.5	mg/L	1.14	0.79%
Cd 228.802†	7462.7	0.2297	mg/L	0.00052	1.149	mg/L	0.0026	0.23%
Co 228.616†	9152.5	0.2518	mg/L	0.00082	1.259	mg/L	0.0041	0.33%
Cr 267.716†	2209.3	0.3566	mg/L	0.00450	1.783	mg/L	0.0225	1.26%
Cu 324.752†	77635.0	0.3023	mg/L	0.00256	1.512	mg/L	0.0128	0.85%
Fe 273.955†	137361.3	104.8	mg/L	1.04	523.8	mg/L	5.21	1.00%
K 766.490†	26725.3	13.41	mg/L	0.100	67.04	mg/L	0.502	0.75%
Mg 279.077†	40422.4	27.36	mg/L	0.279	136.8	mg/L	1.40	1.02%
Mn 257.610†	183860.9	5.082	mg/L	0.0486	25.41	mg/L	0.243	0.96%
Mo 202.031†	79.1	0.00361	mg/L	0.000193	0.01806	mg/L	0.000965	5.34%
Na 589.592†	63258.3	4.965	mg/L	0.0361	24.82	mg/L	0.181	0.73%
Na 330.237†	124.9	4.729	mg/L	0.1993	23.65	mg/L	0.997	4.21%
Ni 231.604†	1353.0	0.3280	mg/L	0.00417	1.640	mg/L	0.0209	1.27%
Pb 220.353†	8229.0	1.049	mg/L	0.0041	5.247	mg/L	0.0207	0.39%
Sb 206.836†	20.8	0.00391	mg/L	0.001979	0.01956	mg/L	0.009895	50.59%
Se 196.026†	1181.7	0.7933	mg/L	0.00294	3.967	mg/L	0.0147	0.37%
Si 288.158†	2476.2	1.155	mg/L	0.0142	5.773	mg/L	0.0708	1.23%
Sn 189.927†	-51.2	-0.00910	mg/L	0.000826	-0.04549	mg/L	0.004132	9.08%
Sr 421.552†	466875.1	0.4984	mg/L	0.00421	2.492	mg/L	0.0210	0.84%
Ti 334.903†	66391.7	3.184	mg/L	0.0267	15.92	mg/L	0.133	0.84%
Tl 190.801†	1963.5	0.7764	mg/L	0.00237	3.882	mg/L	0.0119	0.31%
V 292.402†	46657.3	0.3531	mg/L	0.00355	1.766	mg/L	0.0177	1.00%
Zn 206.200†	4206.7	1.038	mg/L	0.0139	5.189	mg/L	0.0693	1.34%

Sequence No.: 20
Sample ID: ~~VR32 APOST~~ SWC 222222
#11-20

Autosampler Location: 314
Date Collected: 11/16/2012 10:25:07 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 APOST SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2240449.9	99.26	%	0.413				0.42%
ScR 361.383	285107.0	99.71	%	0.715				0.72%
Ag 328.068†	84603.8	0.4789	mg/L	0.00721	2.395	mg/L	0.0360	1.51%
Al 308.215†	193242.4	108.5	mg/L	1.06	542.5	mg/L	5.29	0.98%
As 188.979†	3536.3	1.959	mg/L	0.0221	9.793	mg/L	0.1105	1.13%
B 249.677†	95.0	0.01100	mg/L	0.001130	0.05500	mg/L	0.005651	10.27%
Ba 233.527†	17289.1	3.793	mg/L	0.0334	18.97	mg/L	0.167	0.88%
Be 313.042†	307237.9	0.4618	mg/L	0.00459	2.309	mg/L	0.0230	0.99%
Ca 317.933†	428479.5	30.17	mg/L	0.279	150.8	mg/L	1.39	0.92%
Cd 228.802†	17177.9	0.5293	mg/L	0.00645	2.646	mg/L	0.0323	1.22%
Co 228.616†	19382.6	0.5419	mg/L	0.00575	2.710	mg/L	0.0287	1.06%
Cr 267.716†	3973.4	0.6399	mg/L	0.00719	3.200	mg/L	0.0359	1.12%
Cu 324.752†	150970.1	0.5845	mg/L	0.00815	2.922	mg/L	0.0408	1.39%
Fe 273.955†	141965.9	108.3	mg/L	1.57	541.4	mg/L	7.86	1.45%
K 766.490†	37840.4	18.98	mg/L	0.128	94.92	mg/L	0.640	0.67%
Mg 279.077†	51548.6	34.90	mg/L	0.369	174.5	mg/L	1.84	1.06%
Mn 257.610†	205040.2	5.668	mg/L	0.0698	28.34	mg/L	0.349	1.23%
Mo 202.031†	77.4	0.00349	mg/L	0.000575	0.01747	mg/L	0.002874	16.45%
Na 589.592†	129420.7	10.16	mg/L	0.073	50.79	mg/L	0.367	0.72%
Na 330.237†	291.3	10.41	mg/L	0.360	52.05	mg/L	1.800	3.46%
Ni 231.604†	2466.2	0.5976	mg/L	0.00539	2.988	mg/L	0.0270	0.90%
Pb 220.353†	16945.3	2.140	mg/L	0.0217	10.70	mg/L	0.108	1.01%
Sb 206.836†	31.5	0.00415	mg/L	0.002091	0.02074	mg/L	0.010456	50.42%
Se 196.026†	2830.4	1.900	mg/L	0.0200	9.502	mg/L	0.0998	1.05%
Si 288.158†	3129.4	1.460	mg/L	0.0246	7.301	mg/L	0.1232	1.69%
Sn 189.927†	-47.2	-0.00785	mg/L	0.000324	-0.03925	mg/L	0.001621	4.13%
Sr 421.552†	692965.8	0.7398	mg/L	0.00683	3.699	mg/L	0.0341	0.92%
Ti 334.903†	64649.4	3.100	mg/L	0.0325	15.50	mg/L	0.162	1.05%
Tl 190.801†	4673.1	1.834	mg/L	0.0180	9.170	mg/L	0.0901	0.98%
V 292.402†	81840.2	0.6230	mg/L	0.00817	3.115	mg/L	0.0408	1.31%
Zn 206.200†	5332.7	1.316	mg/L	0.0176	6.578	mg/L	0.0879	1.34%

Sequence No.: 21
Sample ID: VR32 L SWC

Autosampler Location: 315
Date Collected: 11/16/2012 10:28:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2241870.5	99.32	%	0.252				0.25%
ScR 361.383	285688.7	99.92	%	1.744				1.75%
Ag 328.068†	-12.0	-0.00002	mg/L	0.000168	-0.00011	mg/L	0.000842	772.65%
Al 308.215†	139525.2	78.34	mg/L	0.590	391.7	mg/L	2.95	0.75%
As 188.979†	-75.9	0.07352	mg/L	0.000772	0.3676	mg/L	0.00386	1.05%
B 249.677†	128.5	0.01620	mg/L	0.000486	0.08100	mg/L	0.002431	3.00%
Ba 233.527†	16971.6	3.717	mg/L	0.0579	18.59	mg/L	0.290	1.56%
Be 313.042†	2116.0	0.00310	mg/L	0.000074	0.01550	mg/L	0.000368	2.38%
Ca 317.933†	844026.3	59.42	mg/L	0.395	297.1	mg/L	1.97	0.66%
Cd 228.802†	1625.6	0.05046	mg/L	0.000104	0.2523	mg/L	0.00052	0.21%
Co 228.616†	3466.7	0.08816	mg/L	0.000305	0.4408	mg/L	0.00152	0.35%
Cr 267.716†	2334.7	0.3760	mg/L	0.00494	1.880	mg/L	0.0247	1.31%
Cu 324.752†	53505.1	0.2109	mg/L	0.00025	1.055	mg/L	0.0012	0.12%
Fe 273.955†	189271.1	144.4	mg/L	1.06	721.8	mg/L	5.32	0.74%
K 766.490†	34203.1	17.16	mg/L	0.203	85.80	mg/L	1.015	1.18%
Mg 279.077†	69358.3	46.96	mg/L	0.334	234.8	mg/L	1.67	0.71%
Mn 257.610†	348969.7	9.646	mg/L	0.0702	48.23	mg/L	0.351	0.73%
Mo 202.031†	112.8	0.00496	mg/L	0.000375	0.02480	mg/L	0.001876	7.56%
Na 589.592†	4771.3	0.3745	mg/L	0.00153	1.872	mg/L	0.0077	0.41%
Na 330.237†	-12.2	-0.3171	mg/L	0.04777	-1.585	mg/L	0.2388	15.06%
Ni 231.604†	1172.3	0.2845	mg/L	0.00603	1.422	mg/L	0.0301	2.12%
Pb 220.353†	15280.2	1.923	mg/L	0.0086	9.615	mg/L	0.0428	0.45%
Sb 206.836†	44.7	0.01057	mg/L	0.001086	0.05284	mg/L	0.005430	10.28%
Se 196.026†	13.0	0.00859	mg/L	0.001729	0.04296	mg/L	0.008646	20.13%
Si 288.158†	2138.7	0.9996	mg/L	0.01572	4.998	mg/L	0.0786	1.57%
Sn 189.927†	-41.2	-0.00256	mg/L	0.001223	-0.01278	mg/L	0.006116	47.86%
Sr 421.552†	467519.9	0.4991	mg/L	0.00294	2.495	mg/L	0.0147	0.59%
Ti 334.903†	85682.3	4.108	mg/L	0.0274	20.54	mg/L	0.137	0.67%
Tl 190.801†	-21.3	0.00588	mg/L	0.001727	0.02939	mg/L	0.008636	29.39%
V 292.402†	21033.7	0.1563	mg/L	0.00043	0.7817	mg/L	0.00217	0.28%
Zn 206.200†	10204.8	2.517	mg/L	0.0419	12.59	mg/L	0.209	1.66%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/16/2012 10:32:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2199777.5	97.46	%	0.705				0.72%
ScR 361.383	274493.3	96.00	%	0.742				0.77%
Ag 328.068†	178100.1	1.008	mg/L	0.0097	1.008	mg/L	0.0097	0.96%
Al 308.215†	3790.5	2.093	mg/L	0.0278	2.093	mg/L	0.0278	1.33%
As 188.979†	3762.9	2.019	mg/L	0.0205	2.019	mg/L	0.0205	1.02%
B 249.677†	7776.1	0.9915	mg/L	0.01126	0.9915	mg/L	0.01126	1.14%
Ba 233.527†	4903.7	1.080	mg/L	0.0061	1.080	mg/L	0.0061	0.56%
Be 313.042†	645145.2	0.9699	mg/L	0.00944	0.9699	mg/L	0.00944	0.97%
Ca 317.933†	30184.6	2.125	mg/L	0.0195	2.125	mg/L	0.0195	0.92%
Cd 228.802†	33947.8	1.059	mg/L	0.0092	1.059	mg/L	0.0092	0.87%
Co 228.616†	37015.0	1.048	mg/L	0.0100	1.048	mg/L	0.0100	0.96%
Cr 267.716†	6578.2	1.059	mg/L	0.0094	1.059	mg/L	0.0094	0.89%
Cu 324.752†	268679.8	1.033	mg/L	0.0088	1.033	mg/L	0.0088	0.86%
Fe 273.955†	2814.0	2.139	mg/L	0.0124	2.139	mg/L	0.0124	0.58%
K 766.490†	40847.1	20.49	mg/L	0.188	20.49	mg/L	0.188	0.92%
Mg 279.077†	3093.4	2.105	mg/L	0.0124	2.105	mg/L	0.0124	0.59%
Mn 257.610†	38361.5	1.061	mg/L	0.0078	1.061	mg/L	0.0078	0.74%
Mo 202.031†	21127.2	1.053	mg/L	0.0082	1.053	mg/L	0.0082	0.78%
Na 589.592†	642349.7	50.42	mg/L	0.471	50.42	mg/L	0.471	0.93%
Na 330.237†	1524.0	52.94	mg/L	0.456	52.94	mg/L	0.456	0.86%
Ni 231.604†	4177.2	1.014	mg/L	0.0029	1.014	mg/L	0.0029	0.28%
Pb 220.353†	16450.2	2.057	mg/L	0.0166	2.057	mg/L	0.0166	0.81%
Sb 206.836†	7107.8	2.173	mg/L	0.0140	2.173	mg/L	0.0140	0.65%
Se 196.026†	2936.4	1.971	mg/L	0.0130	1.971	mg/L	0.0130	0.66%
Si 288.158†	4642.4	2.156	mg/L	0.0147	2.156	mg/L	0.0147	0.68%
Sn 189.927†	4022.3	1.033	mg/L	0.0084	1.033	mg/L	0.0084	0.81%
Sr 421.552†	918881.6	0.9809	mg/L	0.00872	0.9809	mg/L	0.00872	0.89%
Ti 334.903†	22717.1	1.089	mg/L	0.0084	1.089	mg/L	0.0084	0.77%
Tl 190.801†	5145.8	2.004	mg/L	0.0115	2.004	mg/L	0.0115	0.58%
V 292.402†	135813.7	1.042	mg/L	0.0100	1.042	mg/L	0.0100	0.96%
Zn 206.200†	4227.3	1.043	mg/L	0.0107	1.043	mg/L	0.0107	1.03%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/16/2012 10:36:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206241.1	97.74	%	1.512				1.55%
ScR 361.383	279930.4	97.90	%	1.042				1.06%
Ag 328.068†	69.2	0.00039	mg/L	0.000225	0.00039	mg/L	0.000225	57.53%
Al 308.215†	25.2	0.01412	mg/L	0.005460	0.01412	mg/L	0.005460	38.66%
As 188.979†	-2.9	-0.00153	mg/L	0.001874	-0.00153	mg/L	0.001874	122.61%
B 249.677†	11.8	0.00150	mg/L	0.000435	0.00150	mg/L	0.000435	28.95%
Ba 233.527†	2.1	0.00047	mg/L	0.001240	0.00047	mg/L	0.001240	264.99%
Be 313.042†	90.2	0.00014	mg/L	0.000045	0.00014	mg/L	0.000045	33.08%
Ca 317.933†	35.1	0.00247	mg/L	0.000666	0.00247	mg/L	0.000666	26.95%
Cd 228.802†	-8.8	-0.00027	mg/L	0.000119	-0.00027	mg/L	0.000119	44.28%
Co 228.616†	-19.3	-0.00055	mg/L	0.000083	-0.00055	mg/L	0.000083	15.04%
Cr 267.716†	-11.8	-0.00189	mg/L	0.000839	-0.00189	mg/L	0.000839	44.28%
Cu 324.752†	94.2	0.00036	mg/L	0.000074	0.00036	mg/L	0.000074	20.57%
Fe 273.955†	12.2	0.00929	mg/L	0.000626	0.00929	mg/L	0.000626	6.74%
K 766.490†	45.5	0.02285	mg/L	0.005779	0.02285	mg/L	0.005779	25.29%
Mg 279.077†	3.7	0.00253	mg/L	0.002254	0.00253	mg/L	0.002254	89.20%
Mn 257.610†	8.3	0.00023	mg/L	0.000162	0.00023	mg/L	0.000162	70.97%
Mo 202.031†	15.5	0.00077	mg/L	0.000227	0.00077	mg/L	0.000227	29.42%
Na 589.592†	23.5	0.00185	mg/L	0.002659	0.00185	mg/L	0.002659	144.05%
Na 330.237†	-14.7	-0.5103	mg/L	0.40102	-0.5103	mg/L	0.40102	78.58%
Ni 231.604†	-4.0	-0.00097	mg/L	0.002039	-0.00097	mg/L	0.002039	209.61%
Pb 220.353†	5.6	0.00070	mg/L	0.000472	0.00070	mg/L	0.000472	67.95%
Sb 206.836†	2.4	0.00076	mg/L	0.000608	0.00076	mg/L	0.000608	79.94%
Se 196.026†	0.9	0.00059	mg/L	0.003326	0.00059	mg/L	0.003326	561.48%
Si 288.158†	6.2	0.00288	mg/L	0.000784	0.00288	mg/L	0.000784	27.20%
Sn 189.927†	-1.1	-0.00028	mg/L	0.000451	-0.00028	mg/L	0.000451	159.08%
Sr 421.552†	87.2	0.00009	mg/L	0.000020	0.00009	mg/L	0.000020	21.73%
Ti 334.903†	14.1	0.00067	mg/L	0.000930	0.00067	mg/L	0.000930	137.81%
Tl 190.801†	-5.1	-0.00200	mg/L	0.002356	-0.00200	mg/L	0.002356	117.68%
V 292.402†	-37.1	-0.00029	mg/L	0.000145	-0.00029	mg/L	0.000145	49.85%
Zn 206.200†	-0.5	-0.00011	mg/L	0.000531	-0.00011	mg/L	0.000531	470.95%

Sequence No.: 24
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 10:40:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2194544.8	97.22	%	0.185				0.19%
ScR 361.383	278645.3	97.45	%	2.509				2.57%
Ag 328.068†	560.6	0.00317	mg/L	0.000037	0.00317	mg/L	0.000037	1.18%
Al 308.215†	106.1	0.05946	mg/L	0.003665	0.05946	mg/L	0.003665	6.16%
As 188.979†	94.2	0.05001	mg/L	0.001108	0.05001	mg/L	0.001108	2.22%
B 249.677†	162.9	0.02079	mg/L	0.000428	0.02079	mg/L	0.000428	2.06%
Ba 233.527†	13.3	0.00293	mg/L	0.000685	0.00293	mg/L	0.000685	23.41%
Be 313.042†	661.0	0.00099	mg/L	0.000074	0.00099	mg/L	0.000074	7.48%
Ca 317.933†	717.9	0.05054	mg/L	0.001905	0.05054	mg/L	0.001905	3.77%
Cd 228.802†	73.4	0.00199	mg/L	0.000087	0.00199	mg/L	0.000087	4.35%
Co 228.616†	105.9	0.00299	mg/L	0.000215	0.00299	mg/L	0.000215	7.20%
Cr 267.716†	26.0	0.00418	mg/L	0.000596	0.00418	mg/L	0.000596	14.26%
Cu 324.752†	648.9	0.00249	mg/L	0.000130	0.00249	mg/L	0.000130	5.23%
Fe 273.955†	75.6	0.05763	mg/L	0.001077	0.05763	mg/L	0.001077	1.87%
K 766.490†	1009.0	0.5062	mg/L	0.02489	0.5062	mg/L	0.02489	4.92%
Mg 279.077†	85.7	0.05812	mg/L	0.005315	0.05812	mg/L	0.005315	9.14%
Mn 257.610†	38.2	0.00106	mg/L	0.000107	0.00106	mg/L	0.000107	10.13%
Mo 202.031†	110.8	0.00552	mg/L	0.000073	0.00552	mg/L	0.000073	1.33%
Na 589.592†	6061.9	0.4758	mg/L	0.01122	0.4758	mg/L	0.01122	2.36%
Na 330.237†	2.4	0.08126	mg/L	0.354596	0.08126	mg/L	0.354596	436.35%
Ni 231.604†	35.0	0.00851	mg/L	0.001515	0.00851	mg/L	0.001515	17.80%
Pb 220.353†	174.9	0.02188	mg/L	0.001641	0.02188	mg/L	0.001641	7.50%
Sb 206.836†	178.5	0.05463	mg/L	0.001245	0.05463	mg/L	0.001245	2.28%
Se 196.026†	78.7	0.05284	mg/L	0.001904	0.05284	mg/L	0.001904	3.60%
Si 288.158†	137.1	0.06368	mg/L	0.004790	0.06368	mg/L	0.004790	7.52%
Sn 189.927†	37.3	0.00959	mg/L	0.001111	0.00959	mg/L	0.001111	11.58%
Sr 421.552†	906.3	0.00097	mg/L	0.000053	0.00097	mg/L	0.000053	5.49%
Ti 334.903†	111.6	0.00535	mg/L	0.000277	0.00535	mg/L	0.000277	5.19%
Tl 190.801†	124.3	0.04859	mg/L	0.000928	0.04859	mg/L	0.000928	1.91%
V 292.402†	385.7	0.00296	mg/L	0.000145	0.00296	mg/L	0.000145	4.89%
Zn 206.200†	36.9	0.00910	mg/L	0.000445	0.00910	mg/L	0.000445	4.89%

Sequence No.: 25
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 10:44:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2156626.1	95.54	%	0.438				0.46%
ScR 361.383	275282.3	96.28	%	0.489				0.51%
Ag 328.068†	-133.3	-0.00075	mg/L	0.000224	-0.00075	mg/L	0.000224	29.82%
Al 308.215†	362630.4	203.6	mg/L	0.14	203.6	mg/L	0.14	0.07%
As 188.979†	40.6	0.01576	mg/L	0.002516	0.01576	mg/L	0.002516	15.96%
B 249.677†	-21.0	-0.00267	mg/L	0.001853	-0.00267	mg/L	0.001853	69.29%
Ba 233.527†	139.9	-0.00162	mg/L	0.000210	-0.00162	mg/L	0.000210	12.94%
Be 313.042†	105.0	0.00016	mg/L	0.000030	0.00016	mg/L	0.000030	19.59%
Ca 317.933†	1446737.6	101.9	mg/L	0.16	101.9	mg/L	0.16	0.16%
Cd 228.802†	57.8	-0.00020	mg/L	0.000157	-0.00020	mg/L	0.000157	77.33%
Co 228.616†	61.5	-0.00085	mg/L	0.000230	-0.00085	mg/L	0.000230	27.00%
Cr 267.716†	4.8	-0.00151	mg/L	0.000889	-0.00151	mg/L	0.000889	59.09%
Cu 324.752†	-1974.4	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	25.63%
Fe 273.955†	259991.2	198.3	mg/L	0.35	198.3	mg/L	0.35	0.18%
K 766.490†	28.7	0.01438	mg/L	0.006419	0.01438	mg/L	0.006419	44.65%
Mg 279.077†	155846.5	105.6	mg/L	1.66	105.6	mg/L	1.66	1.58%
Mn 257.610†	27.6	0.00071	mg/L	0.000181	0.00071	mg/L	0.000181	25.37%
Mo 202.031†	57.5	0.00176	mg/L	0.000165	0.00176	mg/L	0.000165	9.33%
Na 589.592†	130.5	0.01024	mg/L	0.003638	0.01024	mg/L	0.003638	35.52%
Na 330.237†	-22.3	-0.7765	mg/L	0.13838	-0.7765	mg/L	0.13838	17.82%
Ni 231.604†	1.7	0.00042	mg/L	0.000176	0.00042	mg/L	0.000176	41.49%
Pb 220.353†	-316.5	0.00102	mg/L	0.001663	0.00102	mg/L	0.001663	163.24%
Sb 206.836†	26.8	0.00802	mg/L	0.001448	0.00802	mg/L	0.001448	18.05%
Se 196.026†	26.0	0.01742	mg/L	0.002816	0.01742	mg/L	0.002816	16.16%
Si 288.158†	-30.5	-0.00138	mg/L	0.003712	-0.00138	mg/L	0.003712	269.65%
Sn 189.927†	-83.0	-0.00869	mg/L	0.000514	-0.00869	mg/L	0.000514	5.92%
Sr 421.552†	3638.9	0.00388	mg/L	Conf. 0.000074	0.00388	mg/L	0.000074	1.91%
Ti 334.903†	152.2	0.00244	mg/L	0.000552	0.00244	mg/L	0.000552	22.63%
Tl 190.801†	-64.7	-0.00413	mg/L	0.003476	-0.00413	mg/L	0.003476	84.06%
V 292.402†	1405.4	0.00380	mg/L	0.000376	0.00380	mg/L	0.000376	9.90%
Zn 206.200†	16.7	0.00412	mg/L	0.000579	0.00412	mg/L	0.000579	14.04%

Sequence No.: 26
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 10:49:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227176.1	98.67	%	0.400				0.41%
ScR 361.383	275651.0	96.41	%	1.436				1.49%
Ag 328.068†	176615.4	0.9997	mg/L	0.00274	0.9997	mg/L	0.00274	0.27%
Al 308.215†	359661.8	201.9	mg/L	1.47	201.9	mg/L	1.47	0.73%
As 188.979†	1911.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.76%
B 249.677†	-9.7	-0.00334	mg/L	0.000583	-0.00334	mg/L	0.000583	17.45%
Ba 233.527†	4975.4	1.064	mg/L	0.0122	1.064	mg/L	0.0122	1.15%
Be 313.042†	649735.1	0.9768	mg/L	0.00231	0.9768	mg/L	0.00231	0.24%
Ca 317.933†	1451145.2	102.2	mg/L	0.29	102.2	mg/L	0.29	0.29%
Cd 228.802†	33114.8	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Co 228.616†	36106.3	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Cr 267.716†	6579.8	1.057	mg/L	0.0142	1.057	mg/L	0.0142	1.34%
Cu 324.752†	266365.5	1.032	mg/L	0.0050	1.032	mg/L	0.0050	0.48%
Fe 273.955†	260344.1	198.6	mg/L	1.06	198.6	mg/L	1.06	0.53%
K 766.490†	-16.3	-0.00817	mg/L	0.016399	-0.00817	mg/L	0.016399	200.84%
Mg 279.077†	150792.3	102.2	mg/L	0.48	102.2	mg/L	0.48	0.47%
Mn 257.610†	35986.7	0.9948	mg/L	0.00461	0.9948	mg/L	0.00461	0.46%
Mo 202.031†	47.2	0.00119	mg/L	0.000498	0.00119	mg/L	0.000498	41.79%
Na 589.592†	342.5	0.02688	mg/L	0.000553	0.02688	mg/L	0.000553	2.06%
Na 330.237†	-16.2	-0.8821	mg/L	0.10893	-0.8821	mg/L	0.10893	12.35%
Ni 231.604†	4063.8	0.9862	mg/L	0.01456	0.9862	mg/L	0.01456	1.48%
Pb 220.353†	7570.0	0.9869	mg/L	0.00426	0.9869	mg/L	0.00426	0.43%
Sb 206.836†	3433.5	1.039	mg/L	0.0012	1.039	mg/L	0.0012	0.11%
Se 196.026†	1486.3	0.9972	mg/L	0.00585	0.9972	mg/L	0.00585	0.59%
Si 288.158†	-34.5	0.00013	mg/L	0.001803	0.00013	mg/L	0.001803	>999.9%
Sn 189.927†	-87.2	-0.00923	mg/L	0.001031	-0.00923	mg/L	0.001031	11.18%
Sr 421.552†	3649.2	0.00390	mg/L	Conf. 0.000081	0.00390	mg/L	0.000081	2.08%
Ti 334.903†	150.9	0.00215	mg/L	0.000192	0.00215	mg/L	0.000192	8.90%
Tl 190.801†	2366.3	0.9373	mg/L	0.00224	0.9373	mg/L	0.00224	0.24%
V 292.402†	130937.5	0.9976	mg/L	0.00376	0.9976	mg/L	0.00376	0.38%
Zn 206.200†	3934.0	0.9704	mg/L	0.01123	0.9704	mg/L	0.01123	1.16%

Sequence No.: 27
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 11/16/2012 10:52:58 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2245873.8	99.50	%	0.811				0.82%
ScR 361.383	283315.6	99.09	%	0.306				0.31%
Ag 328.068†	174930.5	0.9902	mg/L	0.00619	0.9902	mg/L	0.00619	0.62%
Al 308.215†	3773.8	2.084	mg/L	0.0143	2.084	mg/L	0.0143	0.69%
As 188.979†	3729.4	1.999	mg/L	0.0206	1.999	mg/L	0.0206	1.03%
B 249.677†	7658.5	0.9765	mg/L	0.00295	0.9765	mg/L	0.00295	0.30%
Ba 233.527†	4847.2	1.068	mg/L	0.0052	1.068	mg/L	0.0052	0.49%
Be 313.042†	638772.9	0.9603	mg/L	0.00684	0.9603	mg/L	0.00684	0.71%
Ca 317.933†	28806.7	2.028	mg/L	0.0119	2.028	mg/L	0.0119	0.59%
Cd 228.802†	33460.4	1.044	mg/L	0.0067	1.044	mg/L	0.0067	0.64%
Co 228.616†	36612.0	1.036	mg/L	0.0038	1.036	mg/L	0.0038	0.37%
Cr 267.716†	6557.1	1.055	mg/L	0.0055	1.055	mg/L	0.0055	0.52%
Cu 324.752†	262464.5	1.009	mg/L	0.0050	1.009	mg/L	0.0050	0.50%
Fe 273.955†	2800.1	2.129	mg/L	0.0222	2.129	mg/L	0.0222	1.04%
K 766.490†	40043.1	20.09	mg/L	0.077	20.09	mg/L	0.077	0.38%
Mg 279.077†	3104.6	2.113	mg/L	0.0057	2.113	mg/L	0.0057	0.27%
Mn 257.610†	36428.0	1.007	mg/L	0.0046	1.007	mg/L	0.0046	0.46%
Mo 202.031†	20878.4	1.040	mg/L	0.0100	1.040	mg/L	0.0100	0.96%
Na 589.592†	624581.9	49.02	mg/L	0.298	49.02	mg/L	0.298	0.61%
Na 330.237†	1498.3	52.03	mg/L	0.230	52.03	mg/L	0.230	0.44%
Ni 231.604†	4145.1	1.006	mg/L	0.0047	1.006	mg/L	0.0047	0.46%
Pb 220.353†	16296.0	2.038	mg/L	0.0172	2.038	mg/L	0.0172	0.84%
Sb 206.836†	7007.4	2.142	mg/L	0.0215	2.142	mg/L	0.0215	1.00%
Se 196.026†	2913.8	1.956	mg/L	0.0143	1.956	mg/L	0.0143	0.73%
Si 288.158†	4550.0	2.113	mg/L	0.0054	2.113	mg/L	0.0054	0.26%
Sn 189.927†	3981.5	1.023	mg/L	0.0089	1.023	mg/L	0.0089	0.87%
Sr 421.552†	897817.7	0.9584	mg/L	0.00657	0.9584	mg/L	0.00657	0.69%
Ti 334.903†	21436.6	1.027	mg/L	0.0065	1.027	mg/L	0.0065	0.64%
Tl 190.801†	5089.8	1.982	mg/L	0.0182	1.982	mg/L	0.0182	0.92%
V 292.402†	133864.0	1.027	mg/L	0.0060	1.027	mg/L	0.0060	0.59%
Zn 206.200†	4224.6	1.042	mg/L	0.0062	1.042	mg/L	0.0062	0.60%

Sequence No.: 28
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 11/16/2012 10:57:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2282848.4	101.1	%	0.71				0.70%
ScR 361.383	289522.5	101.3	%	0.80				0.79%
Ag 328.068†	49.8	0.00028	mg/L	0.000263	0.00028	mg/L	0.000263	93.38%
Al 308.215†	26.0	0.01462	mg/L	0.000506	0.01462	mg/L	0.000506	3.46%
As 188.979†	0.9	0.00048	mg/L	0.001711	0.00048	mg/L	0.001711	356.99%
B 249.677†	16.0	0.00204	mg/L	0.000799	0.00204	mg/L	0.000799	39.18%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000450	-0.00043	mg/L	0.000450	105.66%
Be 313.042†	122.5	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.37%
Ca 317.933†	75.1	0.00529	mg/L	0.000179	0.00529	mg/L	0.000179	3.38%
Cd 228.802†	-8.7	-0.00028	mg/L	0.000156	-0.00028	mg/L	0.000156	56.20%
Co 228.616†	-11.3	-0.00032	mg/L	0.000035	-0.00032	mg/L	0.000035	10.98%
Cr 267.716†	-7.4	-0.00119	mg/L	0.000597	-0.00119	mg/L	0.000597	50.09%
Cu 324.752†	104.1	0.00040	mg/L	0.000121	0.00040	mg/L	0.000121	30.32%
Fe 273.955†	15.4	0.01178	mg/L	0.000655	0.01178	mg/L	0.000655	5.56%
K 766.490†	-4.7	-0.00236	mg/L	0.024789	-0.00236	mg/L	0.024789	>999.9%
Mg 279.077†	8.8	0.00600	mg/L	0.002743	0.00600	mg/L	0.002743	45.75%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000105	-0.00001	mg/L	0.000105	867.35%
Mo 202.031†	9.7	0.00048	mg/L	0.000181	0.00048	mg/L	0.000181	37.62%
Na 589.592†	74.7	0.00586	mg/L	0.004456	0.00586	mg/L	0.004456	75.99%
Na 330.237†	-10.4	-0.3604	mg/L	0.24897	-0.3604	mg/L	0.24897	69.08%
Ni 231.604†	-2.7	-0.00066	mg/L	0.001049	-0.00066	mg/L	0.001049	159.46%
Pb 220.353†	8.2	0.00103	mg/L	0.000615	0.00103	mg/L	0.000615	59.87%
Sb 206.836†	6.2	0.00191	mg/L	0.001988	0.00191	mg/L	0.001988	103.96%
Se 196.026†	3.5	0.00238	mg/L	0.002705	0.00238	mg/L	0.002705	113.63%
Si 288.158†	-1.8	-0.00082	mg/L	0.004960	-0.00082	mg/L	0.004960	607.93%
Sn 189.927†	-3.7	-0.00095	mg/L	0.001088	-0.00095	mg/L	0.001088	114.08%
Sr 421.552†	128.0	0.00014	mg/L	0.000012	0.00014	mg/L	0.000012	8.70%
Ti 334.903†	15.5	0.00074	mg/L	0.000522	0.00074	mg/L	0.000522	70.17%
Tl 190.801†	1.3	0.00053	mg/L	0.000746	0.00053	mg/L	0.000746	141.10%
V 292.402†	-16.6	-0.00013	mg/L	0.000098	-0.00013	mg/L	0.000098	74.03%
Zn 206.200†	-0.3	-0.00008	mg/L	0.000713	-0.00008	mg/L	0.000713	853.61%

Sequence No.: 29
Sample ID: VR34 MB1 SWC

Dilution: 2.000000X

Del

Autosampler Location: 316
Date Collected: 11/16/2012 11:02:07 AM
Data Type: Original

Nebulizer Parameters: VR34 MB1 SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR34 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2310649.3	102.4	%	0.51				0.50%
ScR 361.383	289706.0	101.3	%	0.63				0.62%
Ag 328.068†	40.0	0.00023	mg/L	0.000206	0.00045	mg/L	0.000413	91.13%
Al 308.215†	18.8	0.01055	mg/L	0.010958	0.02110	mg/L	0.021916	103.87%
As 188.979†	-0.9	-0.00045	mg/L	0.002683	-0.00090	mg/L	0.005365	592.86%
B 249.677†	1.3	0.00017	mg/L	0.000338	0.00034	mg/L	0.000676	196.30%
Ba 233.527†	-3.3	-0.00073	mg/L	0.000325	-0.00146	mg/L	0.000649	44.43%
Be 313.042†	35.0	0.00005	mg/L	0.000022	0.00011	mg/L	0.000045	42.33%
Ca 317.933†	185.3	0.01305	mg/L	0.001109	0.02609	mg/L	0.002218	8.50%
Cd 228.802†	-9.8	-0.00031	mg/L	0.000190	-0.00061	mg/L	0.000380	61.86%
Co 228.616†	-15.3	-0.00043	mg/L	0.000113	-0.00087	mg/L	0.000226	26.06%
Cr 267.716†	-9.3	-0.00150	mg/L	0.000438	-0.00299	mg/L	0.000877	29.29%
Cu 324.752†	167.1	0.00064	mg/L	0.000077	0.00129	mg/L	0.000153	11.92%
Fe 273.955†	14.1	0.01074	mg/L	0.000295	0.02147	mg/L	0.000590	2.75%
K 766.490†	17.9	0.00898	mg/L	0.010027	0.01796	mg/L	0.020055	111.63%
Mg 279.077†	9.2	0.00624	mg/L	0.001872	0.01248	mg/L	0.003745	30.01%
Mn 257.610†	9.4	0.00026	mg/L	0.000120	0.00052	mg/L	0.000239	45.91%
Mo 202.031†	-1.0	-0.00005	mg/L	0.000194	-0.00010	mg/L	0.000387	396.73%
Na 589.592†	38.2	0.00300	mg/L	0.002060	0.00600	mg/L	0.004120	68.68%
Na 330.237†	-14.9	-0.5194	mg/L	0.57413	-1.039	mg/L	1.1483	110.54%
Ni 231.604†	-4.3	-0.00104	mg/L	0.000643	-0.00208	mg/L	0.001286	61.86%
Pb 220.353†	-0.4	-0.00005	mg/L	0.000334	-0.00009	mg/L	0.000669	721.84%
Sb 206.836†	0.6	0.00020	mg/L	0.000993	0.00040	mg/L	0.001986	496.76%
Se 196.026†	7.9	0.00528	mg/L	0.001984	0.01057	mg/L	0.003968	37.55%
Si 288.158†	1.4	0.00064	mg/L	0.002035	0.00127	mg/L	0.004070	320.47%
Sn 189.927†	-4.9	-0.00127	mg/L	0.000565	-0.00253	mg/L	0.001130	44.58%
Sr 421.552†	28.0	0.00003	mg/L	0.000036	0.00006	mg/L	0.000072	119.90%
Ti 334.903†	1.3	0.00006	mg/L	0.000854	0.00013	mg/L	0.001708	>999.9%
Tl 190.801†	1.2	0.00048	mg/L	0.000978	0.00096	mg/L	0.001957	203.76%
V 292.402†	-39.2	-0.00031	mg/L	0.000169	-0.00061	mg/L	0.000338	55.28%
Zn 206.200†	21.8	0.00537	mg/L	0.000207	0.01074	mg/L	0.000415	3.86%

Sequence No.: 30
Sample ID: VR34 B SWC

Dilution: 5.000000X

Del

Autosampler Location: 317
Date Collected: 11/16/2012 11:06:24 AM
Data Type: Original

Nebulizer Parameters: VR34 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2298846.2	101.8	%	0.36				0.35%
ScR 361.383	297106.6	103.9	%	3.06				2.94%
Ag 328.068†	-47.8	-0.00022	mg/L	0.000217	-0.00112	mg/L	0.001085	97.21%
Al 308.215†	133538.1	74.98	mg/L	2.437	374.9	mg/L	12.18	3.25%
As 188.979†	-64.6	0.05467	mg/L	0.004329	0.2733	mg/L	0.02165	7.92%
B 249.677†	87.3	0.01104	mg/L	0.001116	0.05521	mg/L	0.005579	10.10%
Ba 233.527†	7179.2	1.568	mg/L	0.0517	7.838	mg/L	0.2586	3.30%
Be 313.042†	1570.3	0.00229	mg/L	0.000113	0.01145	mg/L	0.000564	4.93%
Ca 317.933†	404790.3	28.50	mg/L	0.889	142.5	mg/L	4.45	3.12%
Cd 228.802†	764.7	0.02362	mg/L	0.000122	0.1181	mg/L	0.00061	0.52%
Co 228.616†	1862.3	0.04536	mg/L	0.000135	0.2268	mg/L	0.00068	0.30%
Cr 267.716†	1610.8	0.2594	mg/L	0.00766	1.297	mg/L	0.0383	2.95%
Cu 324.752†	25996.6	0.1031	mg/L	0.00039	0.5153	mg/L	0.00194	0.38%
Fe 273.955†	118848.3	90.64	mg/L	3.213	453.2	mg/L	16.07	3.54%
K 766.490†	15395.4	7.724	mg/L	0.2657	38.62	mg/L	1.329	3.44%
Mg 279.077†	47164.6	31.94	mg/L	1.090	159.7	mg/L	5.45	3.41%
Mn 257.610†	171224.4	4.733	mg/L	0.1604	23.66	mg/L	0.802	3.39%
Mo 202.031†	65.3	0.00293	mg/L	0.000460	0.01466	mg/L	0.002302	15.70%
Na 589.592†	7841.2	0.6154	mg/L	0.01745	3.077	mg/L	0.0873	2.84%
Na 330.237†	-6.8	0.1393	mg/L	0.07590	0.6963	mg/L	0.37951	54.50%
Ni 231.604†	564.7	0.1370	mg/L	0.00504	0.6851	mg/L	0.02522	3.68%
Pb 220.353†	8738.2	1.107	mg/L	0.0031	5.533	mg/L	0.0157	0.28%
Sb 206.836†	30.7	0.00758	mg/L	0.001313	0.03790	mg/L	0.006566	17.32%
Se 196.026†	10.3	0.00683	mg/L	0.003294	0.03415	mg/L	0.016472	48.23%
Si 288.158†	2561.5	1.194	mg/L	0.0353	5.970	mg/L	0.1764	2.96%
Sn 189.927†	-30.6	-0.00382	mg/L	0.000754	-0.01912	mg/L	0.003769	19.72%
Sr 421.552†	258929.8	0.2764	mg/L	0.00879	1.382	mg/L	0.0439	3.18%
Ti 334.903†	66167.1	3.173	mg/L	0.1042	15.87	mg/L	0.521	3.28%
Tl 190.801†	-13.6	0.00343	mg/L	0.002413	0.01716	mg/L	0.012066	70.32%
V 292.402†	21335.9	0.1598	mg/L	0.00065	0.7990	mg/L	0.00327	0.41%
Zn 206.200†	4250.9	1.049	mg/L	0.0307	5.243	mg/L	0.1537	2.93%

Sequence No.: 31
Sample ID: VR34 C SWC

Dilution: 5.000000X

Del

Autosampler Location: 318
Date Collected: 11/16/2012 11:10:25 AM
Data Type: Original

Nebulizer Parameters: VR34 C SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR34 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263145.3	100.3	%	0.61				0.61%
ScR 361.383	286349.3	100.1	%	1.33				1.33%
Ag 328.068†	-60.6	-0.00031	mg/L	0.000047	-0.00157	mg/L	0.000237	15.08%
Al 308.215†	102093.7	57.32	mg/L	1.015	286.6	mg/L	5.07	1.77%
As 188.979†	-15.4	0.05660	mg/L	0.001745	0.2830	mg/L	0.00872	3.08%
B 249.677†	65.6	0.00830	mg/L	0.000493	0.04151	mg/L	0.002464	5.94%
Ba 233.527†	3543.0	0.7707	mg/L	0.00464	3.853	mg/L	0.0232	0.60%
Be 313.042†	1343.6	0.00197	mg/L	0.000053	0.00986	mg/L	0.000266	2.70%
Ca 317.933†	286302.1	20.16	mg/L	0.421	100.8	mg/L	2.10	2.09%
Cd 228.802†	582.7	0.01790	mg/L	0.000375	0.08948	mg/L	0.001874	2.09%
Co 228.616†	1145.0	0.02713	mg/L	0.000280	0.1356	mg/L	0.00140	1.03%
Cr 267.716†	393.6	0.06419	mg/L	0.002247	0.3209	mg/L	0.01123	3.50%
Cu 324.752†	19791.0	0.07831	mg/L	0.001071	0.3915	mg/L	0.00535	1.37%
Fe 273.955†	82692.9	63.07	mg/L	1.280	315.3	mg/L	6.40	2.03%
K 766.490†	11154.7	5.596	mg/L	0.0855	27.98	mg/L	0.428	1.53%
Mg 279.077†	20253.7	13.70	mg/L	0.272	68.51	mg/L	1.361	1.99%
Mn 257.610†	91212.1	2.521	mg/L	0.0521	12.61	mg/L	0.260	2.07%
Mo 202.031†	47.9	0.00217	mg/L	0.000325	0.01083	mg/L	0.001626	15.01%
Na 589.592†	8740.4	0.6860	mg/L	0.01165	3.430	mg/L	0.0582	1.70%
Na 330.237†	-10.9	-0.1393	mg/L	0.07390	-0.6963	mg/L	0.36950	53.07%
Ni 231.604†	250.1	0.06069	mg/L	0.001143	0.3034	mg/L	0.00571	1.88%
Pb 220.353†	4584.1	0.5841	mg/L	0.00808	2.920	mg/L	0.0404	1.38%
Sb 206.836†	15.5	0.00516	mg/L	0.000719	0.02582	mg/L	0.003596	13.92%
Se 196.026†	9.6	0.00637	mg/L	0.003199	0.03187	mg/L	0.015993	50.18%
Si 288.158†	1904.1	0.8864	mg/L	0.01336	4.432	mg/L	0.0668	1.51%
Sn 189.927†	-26.9	-0.00406	mg/L	0.001584	-0.02032	mg/L	0.007918	38.96%
Sr 421.552†	236228.8	0.2522	mg/L	0.00475	1.261	mg/L	0.0238	1.88%
Ti 334.903†	48033.7	2.304	mg/L	0.0440	11.52	mg/L	0.220	1.91%
Tl 190.801†	-11.8	0.00157	mg/L	0.000781	0.00786	mg/L	0.003905	49.71%
V 292.402†	13097.8	0.09717	mg/L	0.000983	0.4858	mg/L	0.00491	1.01%
Zn 206.200†	3493.1	0.8617	mg/L	0.00902	4.308	mg/L	0.0451	1.05%

Sequence No.: 32
Sample ID: VR34 D SWC

Dilution: 5.000000X

Autosampler Location: 319
Date Collected: 11/16/2012 11:14:26 AM
Data Type: Original

Nebulizer Parameters: VR34 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2228209.8	98.72	%	0.163				0.17%
ScR 361.383	285645.4	99.90	%	2.075				2.08%
Ag 328.068†	-7.4	-0.00000	mg/L	0.000185	-0.00001	mg/L	0.000926	>999.9%
Al 308.215†	111590.5	62.65	mg/L	1.506	313.3	mg/L	7.53	2.40%
As 188.979†	-13.1	0.07898	mg/L	0.002193	0.3949	mg/L	0.01097	2.78%
B 249.677†	90.5	0.01145	mg/L	0.000831	0.05727	mg/L	0.004156	7.26%
Ba 233.527†	3996.0	0.8657	mg/L	0.01883	4.328	mg/L	0.0942	2.18%
Be 313.042†	1425.9	0.00208	mg/L	0.000066	0.01040	mg/L	0.000328	3.15%
Ca 317.933†	346312.3	24.38	mg/L	0.650	121.9	mg/L	3.25	2.67%
Cd 228.802†	1101.4	0.03402	mg/L	0.000081	0.1701	mg/L	0.00041	0.24%
Co 228.616†	1701.7	0.04107	mg/L	0.000294	0.2053	mg/L	0.00147	0.72%
Cr 267.716†	806.9	0.1308	mg/L	0.00330	0.6542	mg/L	0.01651	2.52%
Cu 324.752†	24209.7	0.09636	mg/L	0.000220	0.4818	mg/L	0.00110	0.23%
Fe 273.955†	121297.0	92.51	mg/L	2.282	462.6	mg/L	11.41	2.47%
K 766.490†	20840.8	10.46	mg/L	0.225	52.28	mg/L	1.123	2.15%
Mg 279.077†	35805.6	24.23	mg/L	0.580	121.2	mg/L	2.90	2.39%
Mn 257.610†	122194.7	3.378	mg/L	0.0785	16.89	mg/L	0.393	2.32%
Mo 202.031†	62.7	0.00285	mg/L	0.000116	0.01426	mg/L	0.000582	4.08%
Na 589.592†	8754.6	0.6871	mg/L	0.01395	3.436	mg/L	0.0697	2.03%
Na 330.237†	-4.9	0.02561	mg/L	0.172896	0.1281	mg/L	0.86448	675.07%
Ni 231.604†	409.0	0.09924	mg/L	0.002402	0.4962	mg/L	0.01201	2.42%
Pb 220.353†	12219.4	1.538	mg/L	0.0072	7.692	mg/L	0.0360	0.47%
Sb 206.836†	31.8	0.00968	mg/L	0.001605	0.04841	mg/L	0.008024	16.58%
Se 196.026†	15.9	0.01055	mg/L	0.002747	0.05277	mg/L	0.013737	26.03%
Si 288.158†	1660.9	0.7748	mg/L	0.01301	3.874	mg/L	0.0651	1.68%
Sn 189.927†	-22.6	-0.00229	mg/L	0.002007	-0.01145	mg/L	0.010037	87.62%
Sr 421.552†	260310.4	0.2779	mg/L	0.00659	1.389	mg/L	0.0330	2.37%
Ti 334.903†	63704.2	3.055	mg/L	0.0743	15.28	mg/L	0.371	2.43%
Tl 190.801†	-13.5	0.00383	mg/L	0.001518	0.01915	mg/L	0.007591	39.65%
V 292.402†	17922.4	0.1330	mg/L	0.00003	0.6649	mg/L	0.00014	0.02%
Zn 206.200†	6134.8	1.513	mg/L	0.0338	7.567	mg/L	0.1691	2.23%

Sequence No.: 33
Sample ID: ~~VR34 A-L SWC~~ ZZZZZC
Dilution: 25.000000X #11-20 Del

Autosampler Location: 320
Date Collected: 11/16/2012 11:18:27 AM
Data Type: Original

Nebulizer Parameters: VR34 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR34 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2187250.1	96.90	%	1.013				1.05%
ScR 361.383	275219.2	96.25	%	1.648				1.71%
Ag 328.068†	22.8	0.00014	mg/L	0.000097	0.00338	mg/L	0.002434	71.93%
Al 308.215†	19208.2	10.78	mg/L	0.233	269.6	mg/L	5.81	2.16%
As 188.979†	-3.0	0.01171	mg/L	0.000711	0.2928	mg/L	0.01778	6.07%
B 249.677†	22.7	0.00289	mg/L	0.000401	0.07215	mg/L	0.010026	13.90%
Ba 233.527†	821.5	0.1784	mg/L	0.00179	4.461	mg/L	0.0448	1.00%
Be 313.042†	368.1	0.00054	mg/L	0.000050	0.01359	mg/L	0.001257	9.25%
Ca 317.933†	75634.6	5.325	mg/L	0.0935	133.1	mg/L	2.34	1.76%
Cd 228.802†	247.2	0.00767	mg/L	0.000259	0.1919	mg/L	0.00647	3.37%
Co 228.616†	276.7	0.00670	mg/L	0.000296	0.1675	mg/L	0.00739	4.41%
Cr 267.716†	113.1	0.01833	mg/L	0.000602	0.4582	mg/L	0.01504	3.28%
Cu 324.752†	4786.8	0.01899	mg/L	0.000627	0.4748	mg/L	0.01569	3.30%
Fe 273.955†	21314.4	16.26	mg/L	0.369	406.4	mg/L	9.22	2.27%
K 766.490†	3380.5	1.696	mg/L	0.0359	42.40	mg/L	0.897	2.12%
Mg 279.077†	6360.5	4.305	mg/L	0.0398	107.6	mg/L	0.99	0.92%
Mn 257.610†	31199.3	0.8625	mg/L	0.01749	21.56	mg/L	0.437	2.03%
Mo 202.031†	10.6	0.00047	mg/L	0.000144	0.01170	mg/L	0.003597	30.76%
Na 589.592†	1456.3	0.1143	mg/L	0.00439	2.857	mg/L	0.1097	3.84%
Na 330.237†	-20.1	-0.7044	mg/L	0.23705	-17.61	mg/L	5.926	33.65%
Ni 231.604†	71.4	0.01733	mg/L	0.000712	0.4334	mg/L	0.01779	4.11%
Pb 220.353†	2898.6	0.3642	mg/L	0.01049	9.104	mg/L	0.2623	2.88%
Sb 206.836†	5.7	0.00176	mg/L	0.000865	0.04406	mg/L	0.021624	49.08%
Se 196.026†	2.2	0.00147	mg/L	0.002161	0.03667	mg/L	0.054031	147.33%
Si 288.158†	320.3	0.1494	mg/L	0.00724	3.734	mg/L	0.1810	4.85%
Sn 189.927†	-7.6	-0.00122	mg/L	0.000370	-0.03058	mg/L	0.009238	30.21%
Sr 421.552†	54317.7	0.05799	mg/L	0.001230	1.450	mg/L	0.0307	2.12%
Ti 334.903†	9925.9	0.4760	mg/L	0.00889	11.90	mg/L	0.222	1.87%
Tl 190.801†	-5.6	-0.00056	mg/L	0.000179	-0.01388	mg/L	0.004481	32.28%
V 292.402†	2758.0	0.02043	mg/L	0.000606	0.5108	mg/L	0.01514	2.96%
Zn 206.200†	1380.0	0.3404	mg/L	0.00341	8.510	mg/L	0.0852	1.00%

Sequence No.: 34
Sample ID: VR34 A SWC

Dilution: 5.000000X

Del

Autosampler Location: 321
Date Collected: 11/16/2012 11:22:27 AM
Data Type: Original

Nebulizer Parameters: VR34 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2149190.2	95.22	%	2.720				2.86%
ScR 361.383	274539.6	96.02	%	3.268				3.40%
Ag 328.068†	86.9	0.00052	mg/L	0.000050	0.00261	mg/L	0.000251	9.60%
Al 308.215†	100242.6	56.28	mg/L	1.541	281.4	mg/L	7.71	2.74%
As 188.979†	3.2	0.07061	mg/L	0.000630	0.3530	mg/L	0.00315	0.89%
B 249.677†	104.1	0.01320	mg/L	0.001418	0.06602	mg/L	0.007089	10.74%
Ba 233.527†	4256.9	0.9244	mg/L	0.01945	4.622	mg/L	0.0972	2.10%
Be 313.042†	1460.6	0.00215	mg/L	0.000101	0.01073	mg/L	0.000503	4.69%
Ca 317.933†	400273.4	28.18	mg/L	0.771	140.9	mg/L	3.85	2.74%
Cd 228.802†	1238.1	0.03834	mg/L	0.002538	0.1917	mg/L	0.01269	6.62%
Co 228.616†	1449.5	0.03515	mg/L	0.002292	0.1757	mg/L	0.01146	6.52%
Cr 267.716†	637.1	0.1033	mg/L	0.00266	0.5166	mg/L	0.01332	2.58%
Cu 324.752†	23726.8	0.09431	mg/L	0.004927	0.4716	mg/L	0.02463	5.22%
Fe 273.955†	111389.1	84.96	mg/L	2.432	424.8	mg/L	12.16	2.86%
K 766.490†	17552.8	8.806	mg/L	0.2757	44.03	mg/L	1.379	3.13%
Mg 279.077†	31465.8	21.29	mg/L	0.578	106.5	mg/L	2.89	2.71%
Mn 257.610†	163584.7	4.522	mg/L	0.1237	22.61	mg/L	0.618	2.73%
Mo 202.031†	62.1	0.00278	mg/L	0.000298	0.01391	mg/L	0.001489	10.70%
Na 589.592†	7583.8	0.5952	mg/L	0.01381	2.976	mg/L	0.0691	2.32%
Na 330.237†	-8.1	-0.3027	mg/L	0.14388	-1.513	mg/L	0.7194	47.54%
Ni 231.604†	369.0	0.08955	mg/L	0.001376	0.4477	mg/L	0.00688	1.54%
Pb 220.353†	14245.2	1.790	mg/L	0.0865	8.952	mg/L	0.4324	4.83%
Sb 206.836†	39.8	0.01215	mg/L	0.001723	0.06077	mg/L	0.008617	14.18%
Se 196.026†	5.3	0.00351	mg/L	0.004529	0.01755	mg/L	0.022644	128.99%
Si 288.158†	1662.5	0.7751	mg/L	0.01863	3.876	mg/L	0.0932	2.40%
Sn 189.927†	-12.2	0.00078	mg/L	0.000380	0.00389	mg/L	0.001899	48.85%
Sr 421.552†	280196.3	0.2991	mg/L	0.00849	1.496	mg/L	0.0425	2.84%
Ti 334.903†	51468.5	2.468	mg/L	0.0700	12.34	mg/L	0.350	2.84%
Tl 190.801†	-12.6	0.00354	mg/L	0.000637	0.01771	mg/L	0.003187	17.99%
V 292.402†	13899.6	0.1029	mg/L	0.00528	0.5145	mg/L	0.02640	5.13%
Zn 206.200†	7180.2	1.771	mg/L	0.0375	8.856	mg/L	0.1875	2.12%

Sequence No.: 35
Sample ID: VR34 ADUP SWC

Dilution: 5.000000X

Del

Autosampler Location: 322
Date Collected: 11/16/2012 11:26:28 AM
Data Type: Original

Nebulizer Parameters: VR34 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206283.3	97.74	%	0.873				0.89%
ScR 361.383	278988.1	97.57	%	0.237				0.24%
Ag 328.068†	122.9	0.00073	mg/L	0.000181	0.00364	mg/L	0.000904	24.87%
Al 308.215†	98358.9	55.22	mg/L	0.599	276.1	mg/L	3.00	1.08%
As 188.979†	9.6	0.07571	mg/L	0.003589	0.3786	mg/L	0.01794	4.74%
B 249.677†	107.2	0.01360	mg/L	0.001376	0.06802	mg/L	0.006879	10.11%
Ba 233.527†	4302.2	0.9349	mg/L	0.00953	4.675	mg/L	0.0476	1.02%
Be 313.042†	1436.9	0.00211	mg/L	0.000012	0.01054	mg/L	0.000059	0.56%
Ca 317.933†	411346.9	28.96	mg/L	0.250	144.8	mg/L	1.25	0.86%
Cd 228.802†	1375.1	0.04267	mg/L	0.000340	0.2133	mg/L	0.00170	0.80%
Co 228.616†	1469.7	0.03564	mg/L	0.000469	0.1782	mg/L	0.00234	1.32%
Cr 267.716†	658.0	0.1066	mg/L	0.00090	0.5329	mg/L	0.00449	0.84%
Cu 324.752†	26404.5	0.1045	mg/L	0.00078	0.5223	mg/L	0.00392	0.75%
Fe 273.955†	107326.1	81.86	mg/L	0.886	409.3	mg/L	4.43	1.08%
K 766.490†	17592.3	8.826	mg/L	0.1074	44.13	mg/L	0.537	1.22%
Mg 279.077†	30919.8	20.92	mg/L	0.219	104.6	mg/L	1.10	1.05%
Mn 257.610†	165451.5	4.574	mg/L	0.0449	22.87	mg/L	0.225	0.98%
Mo 202.031†	69.9	0.00316	mg/L	0.000219	0.01582	mg/L	0.001097	6.93%
Na 589.592†	7271.9	0.5707	mg/L	0.00645	2.854	mg/L	0.0322	1.13%
Na 330.237†	-7.9	-0.3184	mg/L	0.15856	-1.592	mg/L	0.7928	49.80%
Ni 231.604†	359.1	0.08713	mg/L	0.000685	0.4356	mg/L	0.00342	0.79%
Pb 220.353†	15532.7	1.951	mg/L	0.0132	9.756	mg/L	0.0658	0.67%
Sb 206.836†	36.3	0.01109	mg/L	0.000916	0.05544	mg/L	0.004578	8.26%
Se 196.026†	7.5	0.00498	mg/L	0.003074	0.02490	mg/L	0.015370	61.74%
Si 288.158†	1571.7	0.7329	mg/L	0.00364	3.665	mg/L	0.0182	0.50%
Sn 189.927†	-6.7	0.00229	mg/L	0.001595	0.01146	mg/L	0.007974	69.60%
Sr 421.552†	293695.6	0.3135	mg/L	0.00346	1.568	mg/L	0.0173	1.10%
Ti 334.903†	52766.0	2.530	mg/L	0.0270	12.65	mg/L	0.135	1.07%
Tl 190.801†	-14.8	0.00230	mg/L	0.003461	0.01148	mg/L	0.017305	150.69%
V 292.402†	14508.1	0.1076	mg/L	0.00070	0.5382	mg/L	0.00350	0.65%
Zn 206.200†	7612.4	1.878	mg/L	0.0191	9.389	mg/L	0.0954	1.02%

Sequence No.: 36
Sample ID: VR34 ASPK SWC

Del

Dilution: 5.000000X

Autosampler Location: 323
Date Collected: 11/16/2012 11:30:29 AM
Data Type: Original

Nebulizer Parameters: VR34 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2155307.2	95.49	%	1.278				1.34%
ScR 361.383	278894.3	97.54	%	1.481				1.52%
Ag 328.068†	35135.6	0.1989	mg/L	0.00549	0.9946	mg/L	0.02744	2.76%
Al 308.215†	99785.7	56.02	mg/L	0.748	280.1	mg/L	3.74	1.34%
As 188.979†	1473.8	0.8465	mg/L	0.02588	4.233	mg/L	0.1294	3.06%
B 249.677†	118.9	0.01466	mg/L	0.000535	0.07329	mg/L	0.002676	3.65%
Ba 233.527†	8089.5	1.770	mg/L	0.0192	8.851	mg/L	0.0958	1.08%
Be 313.042†	133573.2	0.2008	mg/L	0.00289	1.004	mg/L	0.0145	1.44%
Ca 317.933†	456894.9	32.17	mg/L	0.464	160.8	mg/L	2.32	1.44%
Cd 228.802†	8430.6	0.2604	mg/L	0.00813	1.302	mg/L	0.0406	3.12%
Co 228.616†	8846.6	0.2451	mg/L	0.00800	1.225	mg/L	0.0400	3.26%
Cr 267.716†	2015.5	0.3246	mg/L	0.00381	1.623	mg/L	0.0191	1.18%
Cu 324.752†	79569.8	0.3088	mg/L	0.00873	1.544	mg/L	0.0436	2.83%
Fe 273.955†	104340.3	79.58	mg/L	1.191	397.9	mg/L	5.95	1.50%
K 766.490†	25832.6	12.96	mg/L	0.213	64.80	mg/L	1.065	1.64%
Mg 279.077†	37600.8	25.46	mg/L	0.345	127.3	mg/L	1.73	1.36%
Mn 257.610†	166529.3	4.604	mg/L	0.0719	23.02	mg/L	0.359	1.56%
Mo 202.031†	76.3	0.00344	mg/L	0.000281	0.01718	mg/L	0.001407	8.19%
Na 589.592†	57925.8	4.546	mg/L	0.0528	22.73	mg/L	0.264	1.16%
Na 330.237†	115.9	3.912	mg/L	0.2136	19.56	mg/L	1.068	5.46%
Ni 231.604†	1204.8	0.2920	mg/L	0.00195	1.460	mg/L	0.0097	0.67%
Pb 220.353†	22106.0	2.773	mg/L	0.0879	13.87	mg/L	0.440	3.17%
Sb 206.836†	44.7	0.01121	mg/L	0.000230	0.05605	mg/L	0.001148	2.05%
Se 196.026†	1178.4	0.7912	mg/L	0.03004	3.956	mg/L	0.1502	3.80%
Si 288.158†	1434.3	0.6705	mg/L	0.00502	3.352	mg/L	0.0251	0.75%
Sn 189.927†	-19.4	-0.00057	mg/L	0.001348	-0.00283	mg/L	0.006738	237.86%
Sr 421.552†	472512.9	0.5044	mg/L	0.00674	2.522	mg/L	0.0337	1.34%
Ti 334.903†	49863.7	2.391	mg/L	0.0331	11.95	mg/L	0.166	1.38%
Tl 190.801†	1942.9	0.7659	mg/L	0.02279	3.829	mg/L	0.1140	2.98%
V 292.402†	40132.0	0.3044	mg/L	0.00810	1.522	mg/L	0.0405	2.66%
Zn 206.200†	8205.6	2.024	mg/L	0.0239	10.12	mg/L	0.120	1.18%

Sequence No.: 37
Sample ID: VR34 APOST SWC
Dilution: 5.000000X

Autosampler Location: 324
Date Collected: 11/16/2012 11:34:16 AM
Data Type: Original

Nebulizer Parameters: VR34 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2148807.7	95.20	%	0.624				0.66%
ScR 361.383	274992.8	96.18	%	0.850				0.88%
Ag 328.068†	93219.8	0.5277	mg/L	0.00519	2.638	mg/L	0.0259	0.98%
Al 308.215†	103687.8	58.21	mg/L	0.871	291.0	mg/L	4.36	1.50%
As 188.979†	4052.1	2.213	mg/L	0.0162	11.07	mg/L	0.081	0.73%
B 249.677†	107.1	0.01243	mg/L	0.000485	0.06213	mg/L	0.002426	3.90%
Ba 233.527†	13982.7	3.068	mg/L	0.0368	15.34	mg/L	0.184	1.20%
Be 313.042†	335091.5	0.5037	mg/L	0.00798	2.519	mg/L	0.0399	1.58%
Ca 317.933†	545804.5	38.43	mg/L	0.513	192.1	mg/L	2.56	1.33%
Cd 228.802†	20242.0	0.6244	mg/L	0.00481	3.122	mg/L	0.0241	0.77%
Co 228.616†	21394.7	0.6006	mg/L	0.00424	3.003	mg/L	0.0212	0.71%
Cr 267.716†	3962.4	0.6375	mg/L	0.00711	3.188	mg/L	0.0355	1.11%
Cu 324.752†	167579.5	0.6476	mg/L	0.00408	3.238	mg/L	0.0204	0.63%
Fe 273.955†	113193.9	86.33	mg/L	1.368	431.6	mg/L	6.84	1.59%
K 766.490†	38024.5	19.08	mg/L	0.200	95.39	mg/L	0.999	1.05%
Mg 279.077†	46464.4	31.46	mg/L	0.391	157.3	mg/L	1.95	1.24%
Mn 257.610†	181041.6	5.005	mg/L	0.0820	25.02	mg/L	0.410	1.64%
Mo 202.031†	80.3	0.00355	mg/L	0.000140	0.01777	mg/L	0.000699	3.93%
Na 589.592†	133883.8	10.51	mg/L	0.151	52.54	mg/L	0.753	1.43%
Na 330.237†	299.8	10.25	mg/L	0.256	51.26	mg/L	1.281	2.50%
Ni 231.604†	2437.1	0.5905	mg/L	0.00660	2.952	mg/L	0.0330	1.12%
Pb 220.353†	32042.4	4.015	mg/L	0.0337	20.08	mg/L	0.168	0.84%
Sb 206.836†	57.5	0.01200	mg/L	0.001946	0.05999	mg/L	0.009732	16.22%
Se 196.026†	3217.5	2.160	mg/L	0.0138	10.80	mg/L	0.069	0.64%
Si 288.158†	1612.6	0.7553	mg/L	0.00824	3.777	mg/L	0.0412	1.09%
Sn 189.927†	-19.7	0.00020	mg/L	0.000983	0.00100	mg/L	0.004913	489.65%
Sr 421.552†	743418.8	0.7936	mg/L	0.01012	3.968	mg/L	0.0506	1.28%
Ti 334.903†	51370.6	2.463	mg/L	0.0402	12.31	mg/L	0.201	1.63%
Tl 190.801†	5286.3	2.071	mg/L	0.0209	10.36	mg/L	0.104	1.01%
V 292.402†	84044.3	0.6408	mg/L	0.00357	3.204	mg/L	0.0179	0.56%
Zn 206.200†	9142.9	2.255	mg/L	0.0202	11.28	mg/L	0.101	0.89%

Sequence No.: 38
Sample ID: VR34 MB1SPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 325
Date Collected: 11/16/2012 11:38:04 AM
Data Type: Original

Nebulizer Parameters: VR34 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2118596.6	93.86	%	0.984				1.05%
ScR 361.383	272914.4	95.45	%	2.314				2.42%
Ag 328.068†	95223.6	0.5390	mg/L	0.00326	1.078	mg/L	0.0065	0.61%
Al 308.215†	3818.1	2.136	mg/L	0.0884	4.272	mg/L	0.1767	4.14%
As 188.979†	3858.0	2.042	mg/L	0.0131	4.083	mg/L	0.0261	0.64%
B 249.677†	8.2	-0.00006	mg/L	0.000541	-0.00011	mg/L	0.001082	941.96%
Ba 233.527†	9927.3	2.188	mg/L	0.0800	4.376	mg/L	0.1601	3.66%
Be 313.042†	339236.1	0.5100	mg/L	0.02053	1.020	mg/L	0.0411	4.03%
Ca 317.933†	147491.2	10.38	mg/L	0.416	20.77	mg/L	0.832	4.00%
Cd 228.802†	17929.9	0.5528	mg/L	0.00455	1.106	mg/L	0.0091	0.82%
Co 228.616†	18873.9	0.5350	mg/L	0.00567	1.070	mg/L	0.0113	1.06%
Cr 267.716†	3371.1	0.5416	mg/L	0.01994	1.083	mg/L	0.0399	3.68%
Cu 324.752†	134376.4	0.5168	mg/L	0.00333	1.034	mg/L	0.0067	0.64%
Fe 273.955†	2852.0	2.171	mg/L	0.0890	4.343	mg/L	0.1781	4.10%
K 766.490†	20795.5	10.43	mg/L	0.433	20.87	mg/L	0.866	4.15%
Mg 279.077†	15980.7	10.84	mg/L	0.416	21.67	mg/L	0.832	3.84%
Mn 257.610†	19414.4	0.5370	mg/L	0.02047	1.074	mg/L	0.0409	3.81%
Mo 202.031†	23.2	0.00102	mg/L	0.000127	0.00203	mg/L	0.000255	12.52%
Na 589.592†	127778.0	10.03	mg/L	0.400	20.06	mg/L	0.799	3.98%
Na 330.237†	281.9	9.640	mg/L	0.1920	19.28	mg/L	0.384	1.99%
Ni 231.604†	2112.6	0.5117	mg/L	0.01770	1.023	mg/L	0.0354	3.46%
Pb 220.353†	16366.2	2.046	mg/L	0.0218	4.092	mg/L	0.0436	1.06%
Sb 206.836†	16.1	-0.00081	mg/L	0.002329	-0.00162	mg/L	0.004659	287.03%
Se 196.026†	3056.6	2.052	mg/L	0.0105	4.105	mg/L	0.0211	0.51%
Si 288.158†	5.3	0.00582	mg/L	0.002194	0.01164	mg/L	0.004389	37.69%
Sn 189.927†	-26.8	-0.00553	mg/L	0.000869	-0.01105	mg/L	0.001738	15.72%
Sr 421.552†	473293.3	0.5053	mg/L	0.02004	1.011	mg/L	0.0401	3.97%
Ti 334.903†	66.2	0.00257	mg/L	0.000247	0.00514	mg/L	0.000494	9.61%
Tl 190.801†	5139.1	2.005	mg/L	0.0103	4.011	mg/L	0.0206	0.51%
V 292.402†	69887.5	0.5360	mg/L	0.00430	1.072	mg/L	0.0086	0.80%
Zn 206.200†	2099.1	0.5179	mg/L	0.01793	1.036	mg/L	0.0359	3.46%

Sequence No.: 39
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 11/16/2012 11:42:05 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2206811.7	97.77	%	0.434				0.44%
ScR 361.383	266266.9	93.12	%	2.816				3.02%
Ag 328.068†	177279.2	1.003	mg/L	0.0108	1.003	mg/L	0.0108	1.07%
Al 308.215†	3956.3	2.186	mg/L	0.0703	2.186	mg/L	0.0703	3.22%
As 188.979†	3793.0	2.035	mg/L	0.0044	2.035	mg/L	0.0044	0.22%
B 249.677†	8173.9	1.042	mg/L	0.0317	1.042	mg/L	0.0317	3.04%
Ba 233.527†	5077.2	1.119	mg/L	0.0364	1.119	mg/L	0.0364	3.26%
Be 313.042†	675541.0	1.016	mg/L	0.0276	1.016	mg/L	0.0276	2.71%
Ca 317.933†	29753.8	2.095	mg/L	0.0636	2.095	mg/L	0.0636	3.04%
Cd 228.802†	34050.4	1.062	mg/L	0.0087	1.062	mg/L	0.0087	0.82%
Co 228.616†	36980.3	1.047	mg/L	0.0100	1.047	mg/L	0.0100	0.95%
Cr 267.716†	6911.9	1.112	mg/L	0.0349	1.112	mg/L	0.0349	3.14%
Cu 324.752†	268239.0	1.031	mg/L	0.0107	1.031	mg/L	0.0107	1.04%
Fe 273.955†	2910.9	2.213	mg/L	0.0655	2.213	mg/L	0.0655	2.96%
K 766.490†	42707.1	21.43	mg/L	0.662	21.43	mg/L	0.662	3.09%
Mg 279.077†	3235.2	2.201	mg/L	0.0697	2.201	mg/L	0.0697	3.17%
Mn 257.610†	38476.2	1.064	mg/L	0.0319	1.064	mg/L	0.0319	2.99%
Mo 202.031†	21292.7	1.061	mg/L	0.0036	1.061	mg/L	0.0036	0.34%
Na 589.592†	670458.8	52.62	mg/L	1.692	52.62	mg/L	1.692	3.21%
Na 330.237†	1591.2	55.27	mg/L	1.214	55.27	mg/L	1.214	2.20%
Ni 231.604†	4340.7	1.054	mg/L	0.0331	1.054	mg/L	0.0331	3.14%
Pb 220.353†	16595.5	2.075	mg/L	0.0056	2.075	mg/L	0.0056	0.27%
Sb 206.836†	7151.3	2.185	mg/L	0.0071	2.185	mg/L	0.0071	0.33%
Se 196.026†	2978.9	2.000	mg/L	0.0040	2.000	mg/L	0.0040	0.20%
Si 288.158†	4849.5	2.253	mg/L	0.0639	2.253	mg/L	0.0639	2.84%
Sn 189.927†	4069.2	1.045	mg/L	0.0064	1.045	mg/L	0.0064	0.61%
Sr 421.552†	960513.9	1.025	mg/L	0.0312	1.025	mg/L	0.0312	3.04%
Ti 334.903†	22729.5	1.089	mg/L	0.0331	1.089	mg/L	0.0331	3.04%
Tl 190.801†	5176.2	2.016	mg/L	0.0027	2.016	mg/L	0.0027	0.13%
V 292.402†	135536.1	1.040	mg/L	0.0121	1.040	mg/L	0.0121	1.16%
Zn 206.200†	4397.6	1.085	mg/L	0.0322	1.085	mg/L	0.0322	2.97%

Sequence No.: 40
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 11/16/2012 11:46:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2218651.4	98.29	%	0.653				0.66%
ScR 361.383	277441.1	97.03	%	0.321				0.33%
Ag 328.068†	27.1	0.00015	mg/L	0.000234	0.00015	mg/L	0.000234	153.05%
Al 308.215†	32.0	0.01793	mg/L	0.001828	0.01793	mg/L	0.001828	10.20%
As 188.979†	-1.1	-0.00053	mg/L	0.001862	-0.00053	mg/L	0.001862	354.04%
B 249.677†	17.8	0.00227	mg/L	0.000857	0.00227	mg/L	0.000857	37.76%
Ba 233.527†	-2.4	-0.00053	mg/L	0.000551	-0.00053	mg/L	0.000551	104.88%
Be 313.042†	151.8	0.00023	mg/L	0.000029	0.00023	mg/L	0.000029	12.63%
Ca 317.933†	30.8	0.00217	mg/L	0.000687	0.00217	mg/L	0.000687	31.70%
Cd 228.802†	-4.9	-0.00015	mg/L	0.000198	-0.00015	mg/L	0.000198	130.78%
Co 228.616†	-14.0	-0.00040	mg/L	0.000137	-0.00040	mg/L	0.000137	34.34%
Cr 267.716†	-8.8	-0.00142	mg/L	0.000553	-0.00142	mg/L	0.000553	38.95%
Cu 324.752†	72.2	0.00028	mg/L	0.000161	0.00028	mg/L	0.000161	57.89%
Fe 273.955†	8.8	0.00669	mg/L	0.000954	0.00669	mg/L	0.000954	14.25%
K 766.490†	34.4	0.01727	mg/L	0.006265	0.01727	mg/L	0.006265	36.27%
Mg 279.077†	2.7	0.00185	mg/L	0.005181	0.00185	mg/L	0.005181	280.71%
Mn 257.610†	0.9	0.00002	mg/L	0.000083	0.00002	mg/L	0.000083	335.33%
Mo 202.031†	16.8	0.00084	mg/L	0.000204	0.00084	mg/L	0.000204	24.29%
Na 589.592†	61.4	0.00482	mg/L	0.002792	0.00482	mg/L	0.002792	57.96%
Na 330.237†	-21.2	-0.7361	mg/L	0.25603	-0.7361	mg/L	0.25603	34.78%
Ni 231.604†	1.5	0.00038	mg/L	0.001510	0.00038	mg/L	0.001510	401.09%
Pb 220.353†	0.7	0.00009	mg/L	0.000373	0.00009	mg/L	0.000373	424.78%
Sb 206.836†	10.7	0.00330	mg/L	0.002100	0.00330	mg/L	0.002100	63.74%
Se 196.026†	3.4	0.00230	mg/L	0.003741	0.00230	mg/L	0.003741	162.81%
Si 288.158†	7.5	0.00351	mg/L	0.001787	0.00351	mg/L	0.001787	50.95%
Sn 189.927†	-1.3	-0.00033	mg/L	0.000502	-0.00033	mg/L	0.000502	153.20%
Sr 421.552†	185.5	0.00020	mg/L	0.000059	0.00020	mg/L	0.000059	29.57%
Ti 334.903†	28.3	0.00136	mg/L	0.000636	0.00136	mg/L	0.000636	46.83%
Tl 190.801†	3.1	0.00120	mg/L	0.000968	0.00120	mg/L	0.000968	80.31%
V 292.402†	-19.2	-0.00015	mg/L	0.000076	-0.00015	mg/L	0.000076	49.44%
Zn 206.200†	0.3	0.00008	mg/L	0.000471	0.00008	mg/L	0.000471	573.91%

User canceled analysis.

Analysis Begun

Start Time: 11/16/2012 12:11:01 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV 6
Autosampler Location: 7
Date Collected: 11/16/2012 12:11:02 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2324139.6	103.0	%	0.56				0.55%
ScR 361.383	288299.8	100.8	%	1.49				1.48%
Ag 328.068†	166891.9	0.9447	mg/L	0.00330	0.9447	mg/L	0.00330	0.35%
Al 308.215†	3587.2	1.981	mg/L	0.0332	1.981	mg/L	0.0332	1.68%
As 188.979†	3584.7	1.922	mg/L	0.0096	1.922	mg/L	0.0096	0.50%
B 249.677†	7474.7	0.9531	mg/L	0.01492	0.9531	mg/L	0.01492	1.57%
Ba 233.527†	4620.9	1.018	mg/L	0.0147	1.018	mg/L	0.0147	1.44%
Be 313.042†	617768.5	0.9287	mg/L	0.01469	0.9287	mg/L	0.01469	1.58%
Ca 317.933†	27095.7	1.908	mg/L	0.0349	1.908	mg/L	0.0349	1.83%
Cd 228.802†	32028.7	0.9992	mg/L	0.00562	0.9992	mg/L	0.00562	0.56%
Co 228.616†	34866.8	0.9868	mg/L	0.00512	0.9868	mg/L	0.00512	0.52%
Cr 267.716†	6314.1	1.016	mg/L	0.0173	1.016	mg/L	0.0173	1.70%
Cu 324.752†	252729.2	0.9715	mg/L	0.00484	0.9715	mg/L	0.00484	0.50%
Fe 273.955†	2643.1	2.009	mg/L	0.0365	2.009	mg/L	0.0365	1.82%
K 766.490†	39054.1	19.59	mg/L	0.281	19.59	mg/L	0.281	1.44%
Mg 279.077†	2937.9	1.999	mg/L	0.0297	1.999	mg/L	0.0297	1.48%
Mn 257.610†	35203.9	0.9734	mg/L	0.01460	0.9734	mg/L	0.01460	1.50%
Mo 202.031†	20134.6	1.003	mg/L	0.0058	1.003	mg/L	0.0058	0.58%
Na 589.592†	612176.7	48.05	mg/L	0.793	48.05	mg/L	0.793	1.65%
Na 330.237†	1469.6	51.04	mg/L	0.691	51.04	mg/L	0.691	1.35%
Ni 231.604†	3965.2	0.9624	mg/L	0.01659	0.9624	mg/L	0.01659	1.72%
Pb 220.353†	15666.5	1.959	mg/L	0.0107	1.959	mg/L	0.0107	0.54%
Sb 206.836†	6748.1	2.063	mg/L	0.0158	2.063	mg/L	0.0158	0.77%
Se 196.026†	2818.3	1.892	mg/L	0.0097	1.892	mg/L	0.0097	0.51%
Si 288.158†	4428.6	2.057	mg/L	0.0344	2.057	mg/L	0.0344	1.67%
Sn 189.927†	3852.5	0.9897	mg/L	0.00754	0.9897	mg/L	0.00754	0.76%
Sr 421.552†	877778.5	0.9370	mg/L	0.01461	0.9370	mg/L	0.01461	1.56%
Ti 334.903†	20775.3	0.9957	mg/L	0.01523	0.9957	mg/L	0.01523	1.53%
Tl 190.801†	4893.6	1.906	mg/L	0.0106	1.906	mg/L	0.0106	0.56%
V 292.402†	127575.6	0.9786	mg/L	0.00470	0.9786	mg/L	0.00470	0.48%
Zn 206.200†	4004.8	0.9876	mg/L	0.01621	0.9876	mg/L	0.01621	1.64%

Sequence No.: 2
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 11/16/2012 12:15:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2221827.8	98.43	%	0.875				0.89%
ScR 361.383	286411.0	100.2	%	0.74				0.74%
Ag 328.068†	65.6	0.00037	mg/L	0.000197	0.00037	mg/L	0.000197	53.03%
Al 308.215†	12.8	0.00715	mg/L	0.009959	0.00715	mg/L	0.009959	139.24%
As 188.979†	-0.3	-0.00012	mg/L	0.001127	-0.00012	mg/L	0.001127	952.53%
B 249.677†	10.2	0.00131	mg/L	0.001419	0.00131	mg/L	0.001419	108.62%
Ba 233.527†	0.3	0.00006	mg/L	0.000663	0.00006	mg/L	0.000663	>999.9%
Be 313.042†	147.6	0.00022	mg/L	0.000040	0.00022	mg/L	0.000040	18.06%
Ca 317.933†	14.5	0.00102	mg/L	0.000511	0.00102	mg/L	0.000511	49.91%
Cd 228.802†	-3.1	-0.00010	mg/L	0.000019	-0.00010	mg/L	0.000019	19.22%
Co 228.616†	-15.9	-0.00045	mg/L	0.000096	-0.00045	mg/L	0.000096	21.16%
Cr 267.716†	-7.1	-0.00115	mg/L	0.000209	-0.00115	mg/L	0.000209	18.21%
Cu 324.752†	79.5	0.00031	mg/L	0.000176	0.00031	mg/L	0.000176	57.75%
Fe 273.955†	3.3	0.00250	mg/L	0.001062	0.00250	mg/L	0.001062	42.41%
K 766.490†	23.4	0.01175	mg/L	0.023372	0.01175	mg/L	0.023372	198.86%
Mg 279.077†	5.9	0.00398	mg/L	0.003514	0.00398	mg/L	0.003514	88.37%
Mn 257.610†	-4.8	-0.00013	mg/L	0.000107	-0.00013	mg/L	0.000107	80.68%
Mo 202.031†	11.6	0.00058	mg/L	0.000245	0.00058	mg/L	0.000245	42.30%
Na 589.592†	106.2	0.00834	mg/L	0.001775	0.00834	mg/L	0.001775	21.29%
Na 330.237†	-14.2	-0.4928	mg/L	0.06911	-0.4928	mg/L	0.06911	14.02%
Ni 231.604†	-3.0	-0.00072	mg/L	0.002398	-0.00072	mg/L	0.002398	331.34%
Pb 220.353†	-3.4	-0.00042	mg/L	0.000302	-0.00042	mg/L	0.000302	71.49%
Sb 206.836†	5.8	0.00178	mg/L	0.001089	0.00178	mg/L	0.001089	61.18%
Se 196.026†	6.4	0.00429	mg/L	0.004231	0.00429	mg/L	0.004231	98.70%
Si 288.158†	0.7	0.00031	mg/L	0.002107	0.00031	mg/L	0.002107	682.33%
Sn 189.927†	-2.0	-0.00050	mg/L	0.000280	-0.00050	mg/L	0.000280	55.81%
Sr 421.552†	169.9	0.00018	mg/L	0.000038	0.00018	mg/L	0.000038	21.11%
Ti 334.903†	30.2	0.00145	mg/L	0.000156	0.00145	mg/L	0.000156	10.75%
Tl 190.801†	0.9	0.00034	mg/L	0.000606	0.00034	mg/L	0.000606	176.61%
V 292.402†	-18.7	-0.00015	mg/L	0.000190	-0.00015	mg/L	0.000190	128.09%
Zn 206.200†	-3.2	-0.00080	mg/L	0.000448	-0.00080	mg/L	0.000448	55.95%

Sequence No.: 3
Sample ID: VR34 E SWC

Autosampler Location: 326
Date Collected: 11/16/2012 12:20:11 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2305695.4	102.1	%	0.19				0.19%
ScR 361.383	289630.4	101.3	%	1.58				1.56%
Ag 328.068†	20.1	0.00015	mg/L	0.000364	0.00073	mg/L	0.001822	251.17%
Al 308.215†	111642.1	62.68	mg/L	0.947	313.4	mg/L	4.74	1.51%
As 188.979†	20.6	0.07925	mg/L	0.001194	0.3963	mg/L	0.00597	1.51%
B 249.677†	100.6	0.01277	mg/L	0.000808	0.06386	mg/L	0.004041	6.33%
Ba 233.527†	5422.5	1.183	mg/L	0.0224	5.916	mg/L	0.1122	1.90%
Be 313.042†	1599.8	0.00235	mg/L	0.000052	0.01177	mg/L	0.000262	2.22%
Ca 317.933†	874842.8	61.59	mg/L	0.962	308.0	mg/L	4.81	1.56%
Cd 228.802†	1262.5	0.03915	mg/L	0.000172	0.1958	mg/L	0.00086	0.44%
Co 228.616†	1341.9	0.03212	mg/L	0.000046	0.1606	mg/L	0.00023	0.14%
Cr 267.716†	621.0	0.1002	mg/L	0.00052	0.5010	mg/L	0.00260	0.52%
Cu 324.752†	32638.6	0.1281	mg/L	0.00073	0.6406	mg/L	0.00363	0.57%
Fe 273.955†	97146.3	74.09	mg/L	1.170	370.5	mg/L	5.85	1.58%
K 766.490†	13635.8	6.841	mg/L	0.0950	34.21	mg/L	0.475	1.39%
Mg 279.077†	27907.2	18.89	mg/L	0.297	94.43	mg/L	1.484	1.57%
Mn 257.610†	159658.6	4.413	mg/L	0.0710	22.07	mg/L	0.355	1.61%
Mo 202.031†	89.9	0.00381	mg/L	0.000420	0.01905	mg/L	0.002102	11.04%
Na 589.592†	9675.6	0.7594	mg/L	0.01357	3.797	mg/L	0.0678	1.79%
Na 330.237†	10.9	0.3145	mg/L	0.17710	1.572	mg/L	0.8855	56.31%
Ni 231.604†	365.3	0.08864	mg/L	0.000587	0.4432	mg/L	0.00294	0.66%
Pb 220.353†	9738.5	1.229	mg/L	0.0080	6.145	mg/L	0.0398	0.65%
Sb 206.836†	24.9	0.00758	mg/L	0.002648	0.03792	mg/L	0.013239	34.92%
Se 196.026†	4.1	0.00270	mg/L	0.004212	0.01348	mg/L	0.021059	156.17%
Si 288.158†	2493.9	1.161	mg/L	0.0230	5.806	mg/L	0.1149	1.98%
Sn 189.927†	-47.4	-0.00414	mg/L	0.000979	-0.02070	mg/L	0.004894	23.64%
Sr 421.552†	597556.4	0.6379	mg/L	0.01014	3.190	mg/L	0.0507	1.59%
Ti 334.903†	52453.9	2.514	mg/L	0.0419	12.57	mg/L	0.209	1.67%
Tl 190.801†	-3.6	0.00590	mg/L	0.001832	0.02951	mg/L	0.009162	31.05%
V 292.402†	14141.7	0.1051	mg/L	0.00034	0.5254	mg/L	0.00171	0.33%
Zn 206.200†	7849.8	1.936	mg/L	0.0337	9.682	mg/L	0.1687	1.74%

Sequence No.: 4
Sample ID: VR34 F SWC

Autosampler Location: 327
Date Collected: 11/16/2012 12:24:14 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2262529.8	100.2	%	0.88				0.88%
ScR 361.383	293271.5	102.6	%	0.94				0.91%
Ag 328.068†	41.6	0.00026	mg/L	0.000199	0.00132	mg/L	0.000997	75.25%
Al 308.215†	85276.8	47.88	mg/L	0.587	239.4	mg/L	2.94	1.23%
As 188.979†	-66.8	0.03571	mg/L	0.001981	0.1786	mg/L	0.00990	5.55%
B 249.677†	106.0	0.01348	mg/L	0.000809	0.06739	mg/L	0.004046	6.00%
Ba 233.527†	4161.0	0.9081	mg/L	0.00639	4.540	mg/L	0.0320	0.70%
Be 313.042†	973.3	0.00141	mg/L	0.000048	0.00706	mg/L	0.000238	3.38%
Ca 317.933†	392942.7	27.66	mg/L	0.295	138.3	mg/L	1.47	1.06%
Cd 228.802†	1025.4	0.03210	mg/L	0.000474	0.1605	mg/L	0.00237	1.48%
Co 228.616†	975.4	0.02195	mg/L	0.000395	0.1097	mg/L	0.00197	1.80%
Cr 267.716†	410.9	0.06655	mg/L	0.000217	0.3328	mg/L	0.00109	0.33%
Cu 324.752†	20743.7	0.08159	mg/L	0.000648	0.4080	mg/L	0.00324	0.79%
Fe 273.955†	73238.6	55.86	mg/L	0.518	279.3	mg/L	2.59	0.93%
K 766.490†	18804.8	9.435	mg/L	0.1885	47.17	mg/L	0.943	2.00%
Mg 279.077†	21746.6	14.72	mg/L	0.171	73.59	mg/L	0.856	1.16%
Mn 257.610†	78101.3	2.159	mg/L	0.0235	10.80	mg/L	0.117	1.09%
Mo 202.031†	74.3	0.00340	mg/L	0.000308	0.01700	mg/L	0.001541	9.07%
Na 589.592†	9134.2	0.7169	mg/L	0.00824	3.585	mg/L	0.0412	1.15%
Na 330.237†	9.1	0.4431	mg/L	0.08408	2.215	mg/L	0.4204	18.98%
Ni 231.604†	174.4	0.04233	mg/L	0.002002	0.2116	mg/L	0.01001	4.73%
Pb 220.353†	10484.7	1.320	mg/L	0.0110	6.598	mg/L	0.0549	0.83%
Sb 206.836†	35.1	0.01124	mg/L	0.001921	0.05621	mg/L	0.009606	17.09%
Se 196.026†	5.5	0.00360	mg/L	0.004589	0.01798	mg/L	0.022946	127.63%
Si 288.158†	2613.0	1.216	mg/L	0.0182	6.080	mg/L	0.0912	1.50%
Sn 189.927†	-19.1	-0.00106	mg/L	0.001014	-0.00530	mg/L	0.005072	95.72%
Sr 421.552†	272940.3	0.2914	mg/L	0.00385	1.457	mg/L	0.0192	1.32%
Ti 334.903†	52966.3	2.540	mg/L	0.0303	12.70	mg/L	0.151	1.19%
Tl 190.801†	-1.4	0.00492	mg/L	0.002390	0.02459	mg/L	0.011950	48.60%
V 292.402†	13436.2	0.09983	mg/L	0.000845	0.4991	mg/L	0.00423	0.85%
Zn 206.200†	5556.8	1.371	mg/L	0.0159	6.854	mg/L	0.0795	1.16%

Sequence No.: 5
Sample ID: VR34 G SWC

Autosampler Location: 328
Date Collected: 11/16/2012 12:28:15 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2290367.3	101.5	%	0.60				0.59%
ScR 361.383	288720.5	101.0	%	1.24				1.23%
Ag 328.068†	165.8	0.00097	mg/L	0.000093	0.00485	mg/L	0.000464	9.58%
Al 308.215†	77576.9	43.55	mg/L	0.542	217.8	mg/L	2.71	1.24%
As 188.979†	-38.0	0.04833	mg/L	0.001662	0.2417	mg/L	0.00831	3.44%
B 249.677†	81.4	0.01033	mg/L	0.000529	0.05166	mg/L	0.002645	5.12%
Ba 233.527†	2449.1	0.5305	mg/L	0.00583	2.653	mg/L	0.0291	1.10%
Be 313.042†	973.2	0.00141	mg/L	0.000042	0.00706	mg/L	0.000212	3.01%
Ca 317.933†	420814.1	29.63	mg/L	0.403	148.1	mg/L	2.02	1.36%
Cd 228.802†	1367.3	0.04279	mg/L	0.000460	0.2139	mg/L	0.00230	1.08%
Co 228.616†	963.6	0.02180	mg/L	0.000170	0.1090	mg/L	0.00085	0.78%
Cr 267.716†	437.8	0.07088	mg/L	0.000222	0.3544	mg/L	0.00111	0.31%
Cu 324.752†	23501.1	0.09225	mg/L	0.000684	0.4613	mg/L	0.00342	0.74%
Fe 273.955†	74413.0	56.75	mg/L	0.869	283.8	mg/L	4.34	1.53%
K 766.490†	16774.2	8.416	mg/L	0.0981	42.08	mg/L	0.490	1.17%
Mg 279.077†	22281.1	15.08	mg/L	0.205	75.40	mg/L	1.024	1.36%
Mn 257.610†	63140.0	1.746	mg/L	0.0251	8.728	mg/L	0.1254	1.44%
Mo 202.031†	57.0	0.00252	mg/L	0.000222	0.01258	mg/L	0.001108	8.81%
Na 589.592†	13863.8	1.088	mg/L	0.0116	5.441	mg/L	0.0582	1.07%
Na 330.237†	13.5	0.4085	mg/L	0.12264	2.043	mg/L	0.6132	30.02%
Ni 231.604†	178.2	0.04323	mg/L	0.000951	0.2162	mg/L	0.00475	2.20%
Pb 220.353†	12002.8	1.508	mg/L	0.0113	7.541	mg/L	0.0566	0.75%
Sb 206.836†	20.2	0.00662	mg/L	0.003671	0.03310	mg/L	0.018357	55.46%
Se 196.026†	4.8	0.00317	mg/L	0.002373	0.01584	mg/L	0.011863	74.88%
Si 288.158†	1975.4	0.9198	mg/L	0.00959	4.599	mg/L	0.0480	1.04%
Sn 189.927†	-17.7	-0.00047	mg/L	0.000236	-0.00234	mg/L	0.001181	50.40%
Sr 421.552†	530139.7	0.5659	mg/L	0.00636	2.830	mg/L	0.0318	1.12%
Ti 334.903†	51153.7	2.453	mg/L	0.0291	12.27	mg/L	0.145	1.19%
Tl 190.801†	-0.5	0.00532	mg/L	0.000498	0.02658	mg/L	0.002491	9.37%
V 292.402†	14447.8	0.1075	mg/L	0.00061	0.5376	mg/L	0.00305	0.57%
Zn 206.200†	7634.2	1.883	mg/L	0.0323	9.416	mg/L	0.1613	1.71%

Sequence No.: 6
Sample ID: VR34 H SWC

Autosampler Location: 329
Date Collected: 11/16/2012 12:32:16 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2270056.9	100.6	%	0.54				0.53%
ScR 361.383	293595.3	102.7	%	3.23				3.14%
Ag 328.068†	-62.3	-0.00032	mg/L	0.000221	-0.00162	mg/L	0.001104	68.01%
Al 308.215†	85262.9	47.87	mg/L	1.485	239.4	mg/L	7.42	3.10%
As 188.979†	-45.6	0.04419	mg/L	0.003403	0.2210	mg/L	0.01702	7.70%
B 249.677†	96.4	0.01225	mg/L	0.000897	0.06125	mg/L	0.004487	7.32%
Ba 233.527†	3710.7	0.8085	mg/L	0.02683	4.043	mg/L	0.1342	3.32%
Be 313.042†	972.4	0.00141	mg/L	0.000095	0.00707	mg/L	0.000473	6.69%
Ca 317.933†	344712.2	24.27	mg/L	0.738	121.3	mg/L	3.69	3.04%
Cd 228.802†	894.7	0.02789	mg/L	0.000380	0.1395	mg/L	0.00190	1.36%
Co 228.616†	944.5	0.02125	mg/L	0.000673	0.1063	mg/L	0.00337	3.17%
Cr 267.716†	412.0	0.06684	mg/L	0.002160	0.3342	mg/L	0.01080	3.23%
Cu 324.752†	19824.5	0.07815	mg/L	0.000695	0.3908	mg/L	0.00348	0.89%
Fe 273.955†	75413.7	57.52	mg/L	1.572	287.6	mg/L	7.86	2.73%
K 766.490†	20745.0	10.41	mg/L	0.322	52.04	mg/L	1.611	3.10%
Mg 279.077†	21892.8	14.82	mg/L	0.449	74.08	mg/L	2.245	3.03%
Mn 257.610†	72424.9	2.002	mg/L	0.0584	10.01	mg/L	0.292	2.92%
Mo 202.031†	65.8	0.00301	mg/L	0.000183	0.01506	mg/L	0.000917	6.09%
Na 589.592†	7333.5	0.5756	mg/L	0.01870	2.878	mg/L	0.0935	3.25%
Na 330.237†	3.2	0.2703	mg/L	0.11805	1.351	mg/L	0.5902	43.67%
Ni 231.604†	196.2	0.04760	mg/L	0.001391	0.2380	mg/L	0.00695	2.92%
Pb 220.353†	7127.9	0.8999	mg/L	0.01660	4.500	mg/L	0.0830	1.84%
Sb 206.836†	22.9	0.00745	mg/L	0.000316	0.03723	mg/L	0.001580	4.24%
Se 196.026†	5.8	0.00381	mg/L	0.003181	0.01903	mg/L	0.015907	83.59%
Si 288.158†	2021.5	0.9411	mg/L	0.03383	4.706	mg/L	0.1692	3.59%
Sn 189.927†	-24.1	-0.00281	mg/L	0.001192	-0.01404	mg/L	0.005962	42.47%
Sr 421.552†	248516.3	0.2653	mg/L	0.00817	1.326	mg/L	0.0408	3.08%
Ti 334.903†	50832.2	2.438	mg/L	0.0706	12.19	mg/L	0.353	2.90%
Tl 190.801†	-1.5	0.00505	mg/L	0.000631	0.02525	mg/L	0.003157	12.50%
V 292.402†	12626.2	0.09362	mg/L	0.001531	0.4681	mg/L	0.00765	1.63%
Zn 206.200†	4858.2	1.198	mg/L	0.0396	5.992	mg/L	0.1982	3.31%

Sequence No.: 7
Sample ID: VR34 I SWC

Autosampler Location: 330
Date Collected: 11/16/2012 12:36:17 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2288974.6	101.4	%	0.38				0.38%
ScR 361.383	293934.8	102.8	%	1.41				1.37%
Ag 328.068†	20.4	0.00014	mg/L	0.000178	0.00072	mg/L	0.000892	123.09%
Al 308.215†	63337.1	35.56	mg/L	0.516	177.8	mg/L	2.58	1.45%
As 188.979†	-0.0	0.05636	mg/L	0.001541	0.2818	mg/L	0.00771	2.73%
B 249.677†	73.6	0.00932	mg/L	0.000143	0.04662	mg/L	0.000716	1.54%
Ba 233.527†	6341.4	1.387	mg/L	0.0235	6.936	mg/L	0.1174	1.69%
Be 313.042†	905.3	0.00132	mg/L	0.000054	0.00658	mg/L	0.000269	4.08%
Ca 317.933†	331108.2	23.31	mg/L	0.342	116.6	mg/L	1.71	1.47%
Cd 228.802†	1188.0	0.03692	mg/L	0.000237	0.1846	mg/L	0.00118	0.64%
Co 228.616†	1226.2	0.02990	mg/L	0.000155	0.1495	mg/L	0.00077	0.52%
Cr 267.716†	469.6	0.07595	mg/L	0.000820	0.3797	mg/L	0.00410	1.08%
Cu 324.752†	18320.7	0.07281	mg/L	0.000647	0.3641	mg/L	0.00324	0.89%
Fe 273.955†	85763.6	65.41	mg/L	1.093	327.1	mg/L	5.47	1.67%
K 766.490†	11688.5	5.864	mg/L	0.0853	29.32	mg/L	0.427	1.46%
Mg 279.077†	20811.5	14.08	mg/L	0.173	70.39	mg/L	0.864	1.23%
Mn 257.610†	287481.1	7.946	mg/L	0.1286	39.73	mg/L	0.643	1.62%
Mo 202.031†	114.2	0.00543	mg/L	0.000250	0.02717	mg/L	0.001249	4.60%
Na 589.592†	8196.1	0.6433	mg/L	0.01005	3.216	mg/L	0.0502	1.56%
Na 330.237†	9.4	0.2082	mg/L	0.19671	1.041	mg/L	0.9835	94.47%
Ni 231.604†	236.5	0.05740	mg/L	0.001401	0.2870	mg/L	0.00700	2.44%
Pb 220.353†	12959.4	1.625	mg/L	0.0048	8.127	mg/L	0.0242	0.30%
Sb 206.836†	25.9	0.00807	mg/L	0.000951	0.04037	mg/L	0.004753	11.77%
Se 196.026†	7.5	0.00493	mg/L	0.004835	0.02467	mg/L	0.024177	97.99%
Si 288.158†	1103.6	0.5146	mg/L	0.01070	2.573	mg/L	0.0535	2.08%
Sn 189.927†	-23.1	-0.00269	mg/L	0.000688	-0.01347	mg/L	0.003441	25.54%
Sr 421.552†	203974.0	0.2177	mg/L	0.00291	1.089	mg/L	0.0145	1.34%
Ti 334.903†	42102.3	2.019	mg/L	0.0305	10.10	mg/L	0.153	1.51%
Tl 190.801†	-9.7	0.00262	mg/L	0.002462	0.01311	mg/L	0.012312	93.93%
V 292.402†	13433.2	0.1007	mg/L	0.00075	0.5034	mg/L	0.00377	0.75%
Zn 206.200†	7124.1	1.757	mg/L	0.0297	8.787	mg/L	0.1487	1.69%

Sequence No.: 8
Sample ID: VR34 J SWC

Autosampler Location: 331
Date Collected: 11/16/2012 12:40:18 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2291452.4	101.5	%	0.60				0.59%
ScR 361.383	292207.9	102.2	%	2.20				2.15%
Ag 328.068†	29.8	0.00020	mg/L	0.000173	0.00101	mg/L	0.000865	85.62%
Al 308.215†	122001.2	68.50	mg/L	2.157	342.5	mg/L	10.79	3.15%
As 188.979†	-11.8	0.06246	mg/L	0.002501	0.3123	mg/L	0.01251	4.00%
B 249.677†	57.6	0.00727	mg/L	0.000788	0.03634	mg/L	0.003941	10.85%
Ba 233.527†	6099.4	1.330	mg/L	0.0251	6.651	mg/L	0.1253	1.88%
Be 313.042†	1382.6	0.00203	mg/L	0.000063	0.01013	mg/L	0.000313	3.09%
Ca 317.933†	283752.9	19.98	mg/L	0.595	99.89	mg/L	2.975	2.98%
Cd 228.802†	1344.6	0.04172	mg/L	0.000623	0.2086	mg/L	0.00311	1.49%
Co 228.616†	1600.4	0.03941	mg/L	0.000458	0.1971	mg/L	0.00229	1.16%
Cr 267.716†	532.6	0.08711	mg/L	0.001187	0.4356	mg/L	0.00594	1.36%
Cu 324.752†	29164.5	0.1154	mg/L	0.00069	0.5769	mg/L	0.00346	0.60%
Fe 273.955†	114608.4	87.41	mg/L	3.041	437.1	mg/L	15.20	3.48%
K 766.490†	15223.8	7.638	mg/L	0.2233	38.19	mg/L	1.116	2.92%
Mg 279.077†	24710.8	16.71	mg/L	0.546	83.55	mg/L	2.730	3.27%
Mn 257.610†	142185.4	3.930	mg/L	0.1351	19.65	mg/L	0.675	3.44%
Mo 202.031†	71.5	0.00334	mg/L	0.000067	0.01670	mg/L	0.000336	2.01%
Na 589.592†	9652.9	0.7576	mg/L	0.02350	3.788	mg/L	0.1175	3.10%
Na 330.237†	14.0	0.4651	mg/L	0.07466	2.325	mg/L	0.3733	16.05%
Ni 231.604†	327.7	0.07952	mg/L	0.001437	0.3976	mg/L	0.00718	1.81%
Pb 220.353†	13321.3	1.678	mg/L	0.0140	8.388	mg/L	0.0700	0.83%
Sb 206.836†	32.1	0.01006	mg/L	0.001184	0.05031	mg/L	0.005919	11.76%
Se 196.026†	15.8	0.01051	mg/L	0.006330	0.05254	mg/L	0.031650	60.24%
Si 288.158†	2784.0	1.296	mg/L	0.0210	6.478	mg/L	0.1050	1.62%
Sn 189.927†	-15.7	-0.00115	mg/L	0.001510	-0.00574	mg/L	0.007552	131.63%
Sr 421.552†	199481.4	0.2130	mg/L	0.00707	1.065	mg/L	0.0353	3.32%
Ti 334.903†	50922.2	2.442	mg/L	0.0784	12.21	mg/L	0.392	3.21%
Tl 190.801†	-15.6	0.00256	mg/L	0.002278	0.01280	mg/L	0.011388	88.96%
V 292.402†	15097.3	0.1118	mg/L	0.00059	0.5591	mg/L	0.00295	0.53%
Zn 206.200†	7132.2	1.759	mg/L	0.0339	8.797	mg/L	0.1695	1.93%

Sequence No.: 9
Sample ID: VR34 K SWC

Autosampler Location: 332
Date Collected: 11/16/2012 12:44:19 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2309748.8	102.3	%	1.53				1.49%
ScR 361.383	294996.2	103.2	%	1.72				1.67%
Ag 328.068†	64.4	0.00040	mg/L	0.000132	0.00202	mg/L	0.000661	32.78%
Al 308.215†	113813.1	63.90	mg/L	1.053	319.5	mg/L	5.26	1.65%
As 188.979†	54.4	0.09574	mg/L	0.001976	0.4787	mg/L	0.00988	2.06%
B 249.677†	45.3	0.00568	mg/L	0.000578	0.02840	mg/L	0.002892	10.18%
Ba 233.527†	6170.5	1.344	mg/L	0.0174	6.719	mg/L	0.0869	1.29%
Be 313.042†	1491.8	0.00219	mg/L	0.000044	0.01094	mg/L	0.000218	2.00%
Ca 317.933†	268883.1	18.93	mg/L	0.316	94.65	mg/L	1.582	1.67%
Cd 228.802†	1468.8	0.04531	mg/L	0.000875	0.2265	mg/L	0.00438	1.93%
Co 228.616†	1845.2	0.04630	mg/L	0.000517	0.2315	mg/L	0.00258	1.12%
Cr 267.716†	990.4	0.1605	mg/L	0.00185	0.8027	mg/L	0.00926	1.15%
Cu 324.752†	33656.3	0.1332	mg/L	0.00113	0.6658	mg/L	0.00567	0.85%
Fe 273.955†	131109.4	100.00	mg/L	1.968	500.0	mg/L	9.84	1.97%
K 766.490†	17936.1	8.999	mg/L	0.1241	44.99	mg/L	0.620	1.38%
Mg 279.077†	36157.4	24.47	mg/L	0.430	122.3	mg/L	2.15	1.76%
Mn 257.610†	182635.9	5.049	mg/L	0.0941	25.24	mg/L	0.470	1.86%
Mo 202.031†	84.4	0.00399	mg/L	0.000498	0.01997	mg/L	0.002490	12.47%
Na 589.592†	7073.5	0.5552	mg/L	0.01046	2.776	mg/L	0.0523	1.88%
Na 330.237†	4.9	0.1338	mg/L	0.08275	0.6688	mg/L	0.41374	61.87%
Ni 231.604†	408.7	0.09918	mg/L	0.000712	0.4959	mg/L	0.00356	0.72%
Pb 220.353†	14254.9	1.793	mg/L	0.0168	8.964	mg/L	0.0842	0.94%
Sb 206.836†	34.1	0.00964	mg/L	0.001280	0.04820	mg/L	0.006400	13.28%
Se 196.026†	14.5	0.00966	mg/L	0.000331	0.04828	mg/L	0.001654	3.43%
Si 288.158†	1581.2	0.7378	mg/L	0.01258	3.689	mg/L	0.0629	1.70%
Sn 189.927†	-16.7	-0.00155	mg/L	0.000187	-0.00775	mg/L	0.000935	12.06%
Sr 421.552†	175140.1	0.1870	mg/L	0.00282	0.9348	mg/L	0.01410	1.51%
Ti 334.903†	49684.7	2.383	mg/L	0.0416	11.92	mg/L	0.208	1.75%
Tl 190.801†	-22.4	0.00113	mg/L	0.000607	0.00563	mg/L	0.003037	53.94%
V 292.402†	17463.0	0.1300	mg/L	0.00083	0.6498	mg/L	0.00417	0.64%
Zn 206.200†	7139.5	1.761	mg/L	0.0288	8.806	mg/L	0.1442	1.64%

Sequence No.: 10
Sample ID: VR34 L SWC

Autosampler Location: 333
Date Collected: 11/16/2012 12:48:20 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 L SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282220.5	101.1	%	0.92				0.91%
ScR 361.383	289610.8	101.3	%	0.55				0.54%
Ag 328.068†	-86.4	-0.00047	mg/L	0.000156	-0.00235	mg/L	0.000781	33.19%
Al 308.215†	43558.6	24.46	mg/L	0.138	122.3	mg/L	0.69	0.57%
As 188.979†	-23.6	0.02355	mg/L	0.001196	0.1177	mg/L	0.00598	5.08%
B 249.677†	6.3	0.00078	mg/L	0.000441	0.00388	mg/L	0.002205	56.84%
Ba 233.527†	835.4	0.1783	mg/L	0.00139	0.8916	mg/L	0.00696	0.78%
Be 313.042†	598.9	0.00087	mg/L	0.000012	0.00436	mg/L	0.000062	1.43%
Ca 317.933†	91328.8	6.430	mg/L	0.0408	32.15	mg/L	0.204	0.64%
Cd 228.802†	217.7	0.00664	mg/L	0.000047	0.03319	mg/L	0.000237	0.71%
Co 228.616†	488.0	0.01089	mg/L	0.000134	0.05446	mg/L	0.000672	1.23%
Cr 267.716†	241.8	0.03949	mg/L	0.000268	0.1974	mg/L	0.00134	0.68%
Cu 324.752†	7769.4	0.03113	mg/L	0.000106	0.1556	mg/L	0.00053	0.34%
Fe 273.955†	46748.3	35.65	mg/L	0.089	178.3	mg/L	0.44	0.25%
K 766.490†	4855.8	2.436	mg/L	0.0424	12.18	mg/L	0.212	1.74%
Mg 279.077†	11818.3	7.995	mg/L	0.0583	39.98	mg/L	0.292	0.73%
Mn 257.610†	23625.1	0.6532	mg/L	0.00311	3.266	mg/L	0.0156	0.48%
Mo 202.031†	18.7	0.00086	mg/L	0.000144	0.00430	mg/L	0.000720	16.75%
Na 589.592†	3246.8	0.2548	mg/L	0.00166	1.274	mg/L	0.0083	0.65%
Na 330.237†	-10.6	-0.1991	mg/L	0.12922	-0.9956	mg/L	0.64610	64.90%
Ni 231.604†	114.2	0.02771	mg/L	0.000665	0.1386	mg/L	0.00333	2.40%
Pb 220.353†	2669.1	0.3380	mg/L	0.00284	1.690	mg/L	0.0142	0.84%
Sb 206.836†	11.0	0.00357	mg/L	0.001534	0.01785	mg/L	0.007669	42.96%
Se 196.026†	8.3	0.00550	mg/L	0.002813	0.02750	mg/L	0.014063	51.15%
Si 288.158†	2652.5	1.233	mg/L	0.0125	6.167	mg/L	0.0624	1.01%
Sn 189.927†	-12.3	-0.00217	mg/L	0.000909	-0.01087	mg/L	0.004544	41.82%
Sr 421.552†	78537.1	0.08384	mg/L	0.000373	0.4192	mg/L	0.00186	0.44%
Ti 334.903†	26563.7	1.274	mg/L	0.0057	6.371	mg/L	0.0286	0.45%
Tl 190.801†	-4.8	0.00163	mg/L	0.000417	0.00813	mg/L	0.002085	25.64%
V 292.402†	8416.5	0.06257	mg/L	0.000232	0.3128	mg/L	0.00116	0.37%
Zn 206.200†	1461.1	0.3604	mg/L	0.00236	1.802	mg/L	0.0118	0.66%

Sequence No.: 11
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 11/16/2012 12:52:20 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2271379.0	100.6	%	0.65				0.65%
ScR 361.383	283879.8	99.28	%	0.906				0.91%
Ag 328.068†	177762.0	1.006	mg/L	0.0075	1.006	mg/L	0.0075	0.75%
Al 308.215†	3686.3	2.036	mg/L	0.0145	2.036	mg/L	0.0145	0.71%
As 188.979†	3666.4	1.966	mg/L	0.0084	1.966	mg/L	0.0084	0.43%
B 249.677†	7593.7	0.9682	mg/L	0.00319	0.9682	mg/L	0.00319	0.33%
Ba 233.527†	4709.9	1.038	mg/L	0.0056	1.038	mg/L	0.0056	0.54%
Be 313.042†	634401.2	0.9537	mg/L	0.00397	0.9537	mg/L	0.00397	0.42%
Ca 317.933†	27834.2	1.960	mg/L	0.0130	1.960	mg/L	0.0130	0.66%
Cd 228.802†	32952.3	1.028	mg/L	0.0061	1.028	mg/L	0.0061	0.59%
Co 228.616†	35719.9	1.011	mg/L	0.0073	1.011	mg/L	0.0073	0.72%
Cr 267.716†	6442.4	1.037	mg/L	0.0086	1.037	mg/L	0.0086	0.83%
Cu 324.752†	258063.9	0.9920	mg/L	0.00265	0.9920	mg/L	0.00265	0.27%
Fe 273.955†	2725.4	2.072	mg/L	0.0195	2.072	mg/L	0.0195	0.94%
K 766.490†	39862.4	20.00	mg/L	0.111	20.00	mg/L	0.111	0.55%
Mg 279.077†	3000.3	2.042	mg/L	0.0175	2.042	mg/L	0.0175	0.86%
Mn 257.610†	36138.2	0.9992	mg/L	0.00687	0.9992	mg/L	0.00687	0.69%
Mo 202.031†	20005.7	0.9969	mg/L	0.00663	0.9969	mg/L	0.00663	0.67%
Na 589.592†	626922.5	49.20	mg/L	0.211	49.20	mg/L	0.211	0.43%
Na 330.237†	1503.0	52.21	mg/L	0.258	52.21	mg/L	0.258	0.49%
Ni 231.604†	4039.9	0.9806	mg/L	0.00545	0.9806	mg/L	0.00545	0.56%
Pb 220.353†	15527.9	1.942	mg/L	0.0126	1.942	mg/L	0.0126	0.65%
Sb 206.836†	6929.9	2.118	mg/L	0.0123	2.118	mg/L	0.0123	0.58%
Se 196.026†	2868.5	1.926	mg/L	0.0076	1.926	mg/L	0.0076	0.40%
Si 288.158†	4506.9	2.093	mg/L	0.0132	2.093	mg/L	0.0132	0.63%
Sn 189.927†	3923.3	1.008	mg/L	0.0049	1.008	mg/L	0.0049	0.48%
Sr 421.552†	899750.8	0.9605	mg/L	0.00554	0.9605	mg/L	0.00554	0.58%
Ti 334.903†	21333.5	1.022	mg/L	0.0037	1.022	mg/L	0.0037	0.36%
Tl 190.801†	4986.6	1.942	mg/L	0.0113	1.942	mg/L	0.0113	0.58%
V 292.402†	133740.9	1.026	mg/L	0.0087	1.026	mg/L	0.0087	0.85%
Zn 206.200†	4088.0	1.008	mg/L	0.0059	1.008	mg/L	0.0059	0.58%

Sequence No.: 12
Sample ID: CB 7

Autosampler Location: 1
Date Collected: 11/16/2012 12:57:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2288125.4	101.4	%	0.81				0.80%
ScR 361.383	290668.7	101.7	%	0.61				0.60%
Ag 328.068†	43.1	0.00024	mg/L	0.000211	0.00024	mg/L	0.000211	86.31%
Al 308.215†	28.6	0.01607	mg/L	0.012539	0.01607	mg/L	0.012539	78.05%
As 188.979†	0.4	0.00026	mg/L	0.000533	0.00026	mg/L	0.000533	207.15%
B 249.677†	10.4	0.00133	mg/L	0.000523	0.00133	mg/L	0.000523	39.33%
Ba 233.527†	-0.7	-0.00015	mg/L	0.000379	-0.00015	mg/L	0.000379	249.09%
Be 313.042†	166.7	0.00025	mg/L	0.000057	0.00025	mg/L	0.000057	22.54%
Ca 317.933†	70.2	0.00494	mg/L	0.001525	0.00494	mg/L	0.001525	30.87%
Cd 228.802†	-6.2	-0.00020	mg/L	0.000104	-0.00020	mg/L	0.000104	52.34%
Co 228.616†	-11.1	-0.00032	mg/L	0.000187	-0.00032	mg/L	0.000187	58.88%
Cr 267.716†	-9.6	-0.00154	mg/L	0.000328	-0.00154	mg/L	0.000328	21.25%
Cu 324.752†	37.6	0.00014	mg/L	0.000141	0.00014	mg/L	0.000141	97.38%
Fe 273.955†	18.1	0.01382	mg/L	0.003927	0.01382	mg/L	0.003927	28.41%
K 766.490†	-9.9	-0.00495	mg/L	0.006149	-0.00495	mg/L	0.006149	124.14%
Mg 279.077†	1.8	0.00120	mg/L	0.003141	0.00120	mg/L	0.003141	260.68%
Mn 257.610†	14.6	0.00040	mg/L	0.000180	0.00040	mg/L	0.000180	44.81%
Mo 202.031†	13.2	0.00066	mg/L	0.000139	0.00066	mg/L	0.000139	21.16%
Na 589.592†	119.4	0.00937	mg/L	0.003559	0.00937	mg/L	0.003559	37.99%
Na 330.237†	-5.8	-0.2026	mg/L	0.29193	-0.2026	mg/L	0.29193	144.10%
Ni 231.604†	-4.0	-0.00097	mg/L	0.000672	-0.00097	mg/L	0.000672	69.32%
Pb 220.353†	4.4	0.00055	mg/L	0.001626	0.00055	mg/L	0.001626	298.23%
Sb 206.836†	5.8	0.00180	mg/L	0.002170	0.00180	mg/L	0.002170	120.88%
Se 196.026†	4.1	0.00278	mg/L	0.002003	0.00278	mg/L	0.002003	72.00%
Si 288.158†	5.5	0.00258	mg/L	0.003362	0.00258	mg/L	0.003362	130.55%
Sn 189.927†	-0.7	-0.00018	mg/L	0.000359	-0.00018	mg/L	0.000359	198.35%
Sr 421.552†	224.5	0.00024	mg/L	0.000034	0.00024	mg/L	0.000034	14.39%
Ti 334.903†	27.6	0.00132	mg/L	0.000364	0.00132	mg/L	0.000364	27.52%
Tl 190.801†	3.3	0.00131	mg/L	0.002660	0.00131	mg/L	0.002660	202.76%
V 292.402†	-18.6	-0.00015	mg/L	0.000120	-0.00015	mg/L	0.000120	80.17%
Zn 206.200†	-0.1	-0.00004	mg/L	0.000875	-0.00004	mg/L	0.000875	>999.9%

Analysis Begun

Start Time: 11/16/2012 1:29:48 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV8
Autosampler Location: 7
Date Collected: 11/16/2012 1:29:49 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2250323.7	99.70	%	0.640				0.64%
ScR 361.383	286872.2	100.3	%	0.98				0.98%
Ag 328.068†	178929.9	1.013	mg/L	0.0050	1.013	mg/L	0.0050	0.49%
Al 308.215†	3627.6	2.002	mg/L	0.0139	2.002	mg/L	0.0139	0.69%
As 188.979†	3690.2	1.978	mg/L	0.0046	1.978	mg/L	0.0046	0.23%
B 249.677†	7524.2	0.9593	mg/L	0.00606	0.9593	mg/L	0.00606	0.63%
Ba 233.527†	4642.5	1.023	mg/L	0.0099	1.023	mg/L	0.0099	0.97%
Be 313.042†	632185.6	0.9504	mg/L	0.00674	0.9504	mg/L	0.00674	0.71%
Ca 317.933†	27505.4	1.936	mg/L	0.0197	1.936	mg/L	0.0197	1.02%
Cd 228.802†	33305.7	1.039	mg/L	0.0037	1.039	mg/L	0.0037	0.36%
Co 228.616†	35983.3	1.018	mg/L	0.0022	1.018	mg/L	0.0022	0.22%
Cr 267.716†	6385.1	1.027	mg/L	0.0054	1.027	mg/L	0.0054	0.52%
Cu 324.752†	268995.9	1.034	mg/L	0.0035	1.034	mg/L	0.0035	0.34%
Fe 273.955†	2692.9	2.047	mg/L	0.0083	2.047	mg/L	0.0083	0.41%
K 766.490†	39440.5	19.79	mg/L	0.211	19.79	mg/L	0.211	1.07%
Mg 279.077†	2964.8	2.018	mg/L	0.0104	2.018	mg/L	0.0104	0.52%
Mn 257.610†	35892.9	0.9925	mg/L	0.00745	0.9925	mg/L	0.00745	0.75%
Mo 202.031†	20199.4	1.007	mg/L	0.0005	1.007	mg/L	0.0005	0.05%
Na 589.592†	620351.5	48.69	mg/L	0.516	48.69	mg/L	0.516	1.06%
Na 330.237†	1494.4	51.91	mg/L	0.128	51.91	mg/L	0.128	0.25%
Ni 231.604†	3995.5	0.9698	mg/L	0.00503	0.9698	mg/L	0.00503	0.52%
Pb 220.353†	15686.1	1.961	mg/L	0.0049	1.961	mg/L	0.0049	0.25%
Sb 206.836†	6975.8	2.133	mg/L	0.0102	2.133	mg/L	0.0102	0.48%
Se 196.026†	2895.2	1.943	mg/L	0.0062	1.943	mg/L	0.0062	0.32%
Si 288.158†	4485.2	2.083	mg/L	0.0194	2.083	mg/L	0.0194	0.93%
Sn 189.927†	3971.3	1.020	mg/L	0.0038	1.020	mg/L	0.0038	0.37%
Sr 421.552†	891792.3	0.9520	mg/L	0.00878	0.9520	mg/L	0.00878	0.92%
Ti 334.903†	21200.3	1.016	mg/L	0.0100	1.016	mg/L	0.0100	0.98%
Tl 190.801†	5009.5	1.951	mg/L	0.0031	1.951	mg/L	0.0031	0.16%
V 292.402†	134916.3	1.035	mg/L	0.0039	1.035	mg/L	0.0039	0.38%
Zn 206.200†	4035.8	0.9953	mg/L	0.00587	0.9953	mg/L	0.00587	0.59%

Sequence No.: 2
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 11/16/2012 1:34:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2270851.9	100.6	%	0.79				0.78%
ScR 361.383	291826.6	102.1	%	1.50				1.47%
Ag 328.068†	95.3	0.00054	mg/L	0.000410	0.00054	mg/L	0.000410	75.94%
Al 308.215†	27.0	0.01515	mg/L	0.013052	0.01515	mg/L	0.013052	86.15%
As 188.979†	0.0	0.00005	mg/L	0.000645	0.00005	mg/L	0.000645	>999.9%
B 249.677†	9.5	0.00121	mg/L	0.000374	0.00121	mg/L	0.000374	30.85%
Ba 233.527†	-5.3	-0.00118	mg/L	0.000737	-0.00118	mg/L	0.000737	62.57%
Be 313.042†	203.7	0.00031	mg/L	0.000032	0.00031	mg/L	0.000032	10.36%
Ca 317.933†	11.4	0.00080	mg/L	0.000441	0.00080	mg/L	0.000441	54.92%
Cd 228.802†	1.1	0.00003	mg/L	0.000096	0.00003	mg/L	0.000096	287.77%
Co 228.616†	-7.5	-0.00021	mg/L	0.000113	-0.00021	mg/L	0.000113	52.84%
Cr 267.716†	-4.6	-0.00074	mg/L	0.000589	-0.00074	mg/L	0.000589	79.23%
Cu 324.752†	32.7	0.00013	mg/L	0.000083	0.00013	mg/L	0.000083	66.01%
Fe 273.955†	2.8	0.00211	mg/L	0.001434	0.00211	mg/L	0.001434	68.14%
K 766.490†	-1.2	-0.00059	mg/L	0.010475	-0.00059	mg/L	0.010475	>999.9%
Mg 279.077†	2.1	0.00140	mg/L	0.008105	0.00140	mg/L	0.008105	580.35%
Mn 257.610†	-4.6	-0.00013	mg/L	0.000103	-0.00013	mg/L	0.000103	80.87%
Mo 202.031†	19.0	0.00095	mg/L	0.000164	0.00095	mg/L	0.000164	17.30%
Na 589.592†	173.1	0.01359	mg/L	0.004605	0.01359	mg/L	0.004605	33.89%
Na 330.237†	-10.7	-0.3717	mg/L	0.28520	-0.3717	mg/L	0.28520	76.73%
Ni 231.604†	-3.8	-0.00092	mg/L	0.000827	-0.00092	mg/L	0.000827	90.27%
Pb 220.353†	8.7	0.00108	mg/L	0.000513	0.00108	mg/L	0.000513	47.29%
Sb 206.836†	12.6	0.00385	mg/L	0.001067	0.00385	mg/L	0.001067	27.69%
Se 196.026†	3.1	0.00205	mg/L	0.002185	0.00205	mg/L	0.002185	106.32%
Si 288.158†	6.4	0.00298	mg/L	0.003775	0.00298	mg/L	0.003775	126.72%
Sn 189.927†	-0.4	-0.00009	mg/L	0.000301	-0.00009	mg/L	0.000301	330.69%
Sr 421.552†	251.3	0.00027	mg/L	0.000027	0.00027	mg/L	0.000027	9.92%
Ti 334.903†	22.1	0.00106	mg/L	0.000464	0.00106	mg/L	0.000464	43.82%
Tl 190.801†	2.6	0.00102	mg/L	0.000837	0.00102	mg/L	0.000837	81.69%
V 292.402†	-16.1	-0.00013	mg/L	0.000099	-0.00013	mg/L	0.000099	78.47%
Zn 206.200†	-0.9	-0.00022	mg/L	0.000593	-0.00022	mg/L	0.000593	266.23%

Sequence No.: 3
Sample ID: VR34 MB1 SWC

Autosampler Location: 334
Date Collected: 11/16/2012 1:39:11 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR34 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2301258.3	102.0	%	0.50				0.49%
ScR 361.383	293136.9	102.5	%	1.94				1.90%
Ag 328.068†	31.2	0.00018	mg/L	0.000268	0.00035	mg/L	0.000536	152.08%
Al 308.215†	24.2	0.01357	mg/L	0.003529	0.02713	mg/L	0.007058	26.01%
As 188.979†	-0.6	-0.00032	mg/L	0.001580	-0.00063	mg/L	0.003161	497.93%
B 249.677†	1.0	0.00013	mg/L	0.000562	0.00025	mg/L	0.001123	445.81%
Ba 233.527†	-6.8	-0.00149	mg/L	0.000651	-0.00298	mg/L	0.001302	43.67%
Be 313.042†	12.1	0.00002	mg/L	0.000039	0.00004	mg/L	0.000079	215.27%
Ca 317.933†	168.9	0.01189	mg/L	0.000906	0.02378	mg/L	0.001811	7.62%
Cd 228.802†	-14.0	-0.00044	mg/L	0.000011	-0.00088	mg/L	0.000021	2.43%
Co 228.616†	-11.8	-0.00034	mg/L	0.000141	-0.00067	mg/L	0.000281	41.68%
Cr 267.716†	-6.9	-0.00112	mg/L	0.001118	-0.00224	mg/L	0.002237	99.99%
Cu 324.752†	50.9	0.00020	mg/L	0.000094	0.00039	mg/L	0.000188	48.11%
Fe 273.955†	6.7	0.00515	mg/L	0.001745	0.01029	mg/L	0.003490	33.91%
K 766.490†	-39.3	-0.01974	mg/L	0.001882	-0.03948	mg/L	0.003764	9.53%
Mg 279.077†	2.8	0.00189	mg/L	0.002039	0.00378	mg/L	0.004079	107.93%
Mn 257.610†	4.6	0.00013	mg/L	0.000063	0.00025	mg/L	0.000126	49.90%
Mo 202.031†	5.0	0.00025	mg/L	0.000222	0.00049	mg/L	0.000445	90.18%
Na 589.592†	37.5	0.00294	mg/L	0.003772	0.00589	mg/L	0.007543	128.08%
Na 330.237†	-6.7	-0.2333	mg/L	0.59278	-0.4666	mg/L	1.18556	254.11%
Ni 231.604†	-3.8	-0.00091	mg/L	0.001175	-0.00182	mg/L	0.002351	128.84%
Pb 220.353†	-3.9	-0.00049	mg/L	0.001032	-0.00098	mg/L	0.002065	211.06%
Sb 206.836†	3.4	0.00106	mg/L	0.000661	0.00212	mg/L	0.001322	62.41%
Se 196.026†	6.1	0.00412	mg/L	0.003205	0.00825	mg/L	0.006410	77.71%
Si 288.158†	-0.1	-0.00003	mg/L	0.001033	-0.00006	mg/L	0.002066	>999.9%
Sn 189.927†	-1.2	-0.00030	mg/L	0.000650	-0.00060	mg/L	0.001300	216.66%
Sr 421.552†	51.9	0.00006	mg/L	0.000021	0.00011	mg/L	0.000043	38.36%
Ti 334.903†	19.5	0.00094	mg/L	0.000492	0.00187	mg/L	0.000984	52.52%
Tl 190.801†	2.7	0.00106	mg/L	0.001910	0.00211	mg/L	0.003820	180.70%
V 292.402†	-42.2	-0.00033	mg/L	0.000093	-0.00065	mg/L	0.000187	28.53%
Zn 206.200†	6.8	0.00167	mg/L	0.000109	0.00334	mg/L	0.000219	6.55%

Sequence No.: 4
Sample ID: VR34 B SWC

Autosampler Location: 335
Date Collected: 11/16/2012 1:43:28 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2254872.9	99.90	%	2.121				2.12%
ScR 361.383	290707.9	101.7	%	0.95				0.94%
Ag 328.068†	-74.1	-0.00037	mg/L	0.000025	-0.00186	mg/L	0.000125	6.72%
Al 308.215†	135375.3	76.01	mg/L	0.697	380.0	mg/L	3.48	0.92%
As 188.979†	-59.6	0.05882	mg/L	0.002598	0.2941	mg/L	0.01299	4.42%
B 249.677†	82.3	0.01039	mg/L	0.000514	0.05196	mg/L	0.002571	4.95%
Ba 233.527†	7133.7	1.557	mg/L	0.0093	7.786	mg/L	0.0466	0.60%
Be 313.042†	1624.0	0.00237	mg/L	0.000033	0.01185	mg/L	0.000164	1.39%
Ca 317.933†	408373.5	28.75	mg/L	0.293	143.8	mg/L	1.46	1.02%
Cd 228.802†	758.8	0.02339	mg/L	0.000375	0.1170	mg/L	0.00187	1.60%
Co 228.616†	1853.1	0.04497	mg/L	0.000599	0.2248	mg/L	0.00299	1.33%
Cr 267.716†	1621.9	0.2612	mg/L	0.00169	1.306	mg/L	0.0085	0.65%
Cu 324.752†	26074.5	0.1035	mg/L	0.00168	0.5173	mg/L	0.00842	1.63%
Fe 273.955†	122189.8	93.19	mg/L	1.201	466.0	mg/L	6.00	1.29%
K 766.490†	15616.2	7.835	mg/L	0.0864	39.17	mg/L	0.432	1.10%
Mg 279.077†	47454.1	32.13	mg/L	0.318	160.7	mg/L	1.59	0.99%
Mn 257.610†	175697.3	4.857	mg/L	0.0480	24.28	mg/L	0.240	0.99%
Mo 202.031†	65.9	0.00296	mg/L	0.000269	0.01480	mg/L	0.001343	9.08%
Na 589.592†	7914.8	0.6212	mg/L	0.00398	3.106	mg/L	0.0199	0.64%
Na 330.237†	-5.4	0.2016	mg/L	0.26383	1.008	mg/L	1.3191	130.85%
Ni 231.604†	564.0	0.1368	mg/L	0.00039	0.6842	mg/L	0.00195	0.28%
Pb 220.353†	8718.2	1.104	mg/L	0.0154	5.521	mg/L	0.0768	1.39%
Sb 206.836†	28.5	0.00692	mg/L	0.001628	0.03461	mg/L	0.008141	23.52%
Se 196.026†	10.7	0.00708	mg/L	0.004133	0.03542	mg/L	0.020665	58.34%
Si 288.158†	2489.7	1.161	mg/L	0.0195	5.804	mg/L	0.0977	1.68%
Sn 189.927†	-32.4	-0.00426	mg/L	0.000317	-0.02128	mg/L	0.001584	7.44%
Sr 421.552†	263831.2	0.2816	mg/L	0.00253	1.408	mg/L	0.0127	0.90%
Ti 334.903†	67274.0	3.227	mg/L	0.0270	16.13	mg/L	0.135	0.84%
Tl 190.801†	-16.7	0.00248	mg/L	0.001744	0.01239	mg/L	0.008721	70.38%
V 292.402†	21302.1	0.1594	mg/L	0.00264	0.7972	mg/L	0.01322	1.66%
Zn 206.200†	4264.1	1.052	mg/L	0.0080	5.259	mg/L	0.0402	0.77%

Sequence No.: 5
Sample ID: VR34 C SWC

Autosampler Location: 336
Date Collected: 11/16/2012 1:47:29 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 C SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2265023.8	100.3	%	0.96				0.96%
ScR 361.383	287137.0	100.4	%	2.07				2.06%
Ag 328.068†	-95.5	-0.00051	mg/L	0.000186	-0.00256	mg/L	0.000932	36.40%
Al 308.215†	103719.0	58.23	mg/L	1.290	291.2	mg/L	6.45	2.21%
As 188.979†	-10.0	0.06078	mg/L	0.001037	0.3039	mg/L	0.00518	1.71%
B 249.677†	65.6	0.00831	mg/L	0.001523	0.04153	mg/L	0.007615	18.33%
Ba 233.527†	3532.0	0.7679	mg/L	0.00911	3.840	mg/L	0.0456	1.19%
Be 313.042†	1374.3	0.00202	mg/L	0.000061	0.01009	mg/L	0.000304	3.01%
Ca 317.933†	290441.7	20.45	mg/L	0.499	102.2	mg/L	2.50	2.44%
Cd 228.802†	561.9	0.01720	mg/L	0.000576	0.08602	mg/L	0.002878	3.35%
Co 228.616†	1126.6	0.02649	mg/L	0.000794	0.1324	mg/L	0.00397	3.00%
Cr 267.716†	401.4	0.06549	mg/L	0.001016	0.3275	mg/L	0.00508	1.55%
Cu 324.752†	19581.0	0.07757	mg/L	0.002316	0.3879	mg/L	0.01158	2.99%
Fe 273.955†	85210.1	64.99	mg/L	1.748	324.9	mg/L	8.74	2.69%
K 766.490†	11372.7	5.706	mg/L	0.1368	28.53	mg/L	0.684	2.40%
Mg 279.077†	20509.6	13.87	mg/L	0.309	69.37	mg/L	1.546	2.23%
Mn 257.610†	93664.3	2.589	mg/L	0.0642	12.95	mg/L	0.321	2.48%
Mo 202.031†	43.7	0.00195	mg/L	0.000469	0.00977	mg/L	0.002347	24.02%
Na 589.592†	8845.7	0.6943	mg/L	0.01632	3.471	mg/L	0.0816	2.35%
Na 330.237†	-0.0	0.2485	mg/L	0.10897	1.242	mg/L	0.5448	43.85%
Ni 231.604†	251.0	0.06091	mg/L	0.000828	0.3046	mg/L	0.00414	1.36%
Pb 220.353†	4519.6	0.5761	mg/L	0.01652	2.881	mg/L	0.0826	2.87%
Sb 206.836†	12.6	0.00428	mg/L	0.001301	0.02138	mg/L	0.006504	30.41%
Se 196.026†	12.9	0.00861	mg/L	0.000467	0.04307	mg/L	0.002336	5.43%
Si 288.158†	1888.7	0.8793	mg/L	0.01774	4.396	mg/L	0.0887	2.02%
Sn 189.927†	-25.6	-0.00368	mg/L	0.000959	-0.01839	mg/L	0.004793	26.07%
Sr 421.552†	241094.6	0.2574	mg/L	0.00594	1.287	mg/L	0.0297	2.31%
Ti 334.903†	49038.8	2.352	mg/L	0.0511	11.76	mg/L	0.256	2.17%
Tl 190.801†	-5.0	0.00443	mg/L	0.001681	0.02217	mg/L	0.008406	37.92%
V 292.402†	12992.4	0.09628	mg/L	0.002919	0.4814	mg/L	0.01460	3.03%
Zn 206.200†	3523.6	0.8692	mg/L	0.01024	4.346	mg/L	0.0512	1.18%

Sequence No.: 6
Sample ID: VR34 D SWC

Autosampler Location: 337
Date Collected: 11/16/2012 1:51:30 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2284629.6	101.2	%	0.91				0.90%
ScR 361.383	294142.0	102.9	%	0.57				0.55%
Ag 328.068†	22.8	0.00017	mg/L	0.000033	0.00083	mg/L	0.000163	19.55%
Al 308.215†	107595.8	60.41	mg/L	0.163	302.0	mg/L	0.82	0.27%
As 188.979†	-21.3	0.07198	mg/L	0.003302	0.3599	mg/L	0.01651	4.59%
B 249.677†	89.4	0.01132	mg/L	0.000746	0.05658	mg/L	0.003728	6.59%
Ba 233.527†	3833.3	0.8302	mg/L	0.00460	4.151	mg/L	0.0230	0.55%
Be 313.042†	1394.4	0.00203	mg/L	0.000012	0.01017	mg/L	0.000061	0.60%
Ca 317.933†	332365.6	23.40	mg/L	0.056	117.0	mg/L	0.28	0.24%
Cd 228.802†	1059.5	0.03274	mg/L	0.000258	0.1637	mg/L	0.00129	0.79%
Co 228.616†	1637.1	0.03945	mg/L	0.000182	0.1973	mg/L	0.00091	0.46%
Cr 267.716†	796.5	0.1292	mg/L	0.00046	0.6459	mg/L	0.00230	0.36%
Cu 324.752†	23393.3	0.09315	mg/L	0.000668	0.4658	mg/L	0.00334	0.72%
Fe 273.955†	118492.3	90.37	mg/L	0.325	451.9	mg/L	1.62	0.36%
K 766.490†	20052.1	10.06	mg/L	0.073	50.30	mg/L	0.366	0.73%
Mg 279.077†	34370.9	23.26	mg/L	0.086	116.3	mg/L	0.43	0.37%
Mn 257.610†	119094.1	3.292	mg/L	0.0092	16.46	mg/L	0.046	0.28%
Mo 202.031†	59.7	0.00271	mg/L	0.000442	0.01356	mg/L	0.002211	16.30%
Na 589.592†	8462.4	0.6642	mg/L	0.00379	3.321	mg/L	0.0189	0.57%
Na 330.237†	-6.3	-0.02868	mg/L	0.052591	-0.1434	mg/L	0.26296	183.35%
Ni 231.604†	392.5	0.09523	mg/L	0.002472	0.4762	mg/L	0.01236	2.60%
Pb 220.353†	11750.1	1.479	mg/L	0.0118	7.397	mg/L	0.0589	0.80%
Sb 206.836†	29.9	0.00906	mg/L	0.000703	0.04529	mg/L	0.003513	7.76%
Se 196.026†	11.0	0.00726	mg/L	0.001403	0.03631	mg/L	0.007017	19.32%
Si 288.158†	1543.5	0.7201	mg/L	0.00616	3.600	mg/L	0.0308	0.86%
Sn 189.927†	-15.1	-0.00050	mg/L	0.000410	-0.00248	mg/L	0.002051	82.54%
Sr 421.552†	252128.4	0.2692	mg/L	0.00091	1.346	mg/L	0.0045	0.34%
Ti 334.903†	61716.9	2.960	mg/L	0.0090	14.80	mg/L	0.045	0.30%
Tl 190.801†	-7.8	0.00587	mg/L	0.001559	0.02935	mg/L	0.007795	26.56%
V 292.402†	17263.5	0.1280	mg/L	0.00109	0.6402	mg/L	0.00545	0.85%
Zn 206.200†	5962.1	1.471	mg/L	0.0060	7.354	mg/L	0.0299	0.41%

Sequence No.: 7
Sample ID: VR34 A-L SWC

Autosampler Location: 338
Date Collected: 11/16/2012 1:55:31 PM
Data Type: Original

Dilution: 25.000000X

Nebulizer Parameters: VR34 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2334453.9	103.4	%	1.13				1.09%
ScR 361.383	299094.2	104.6	%	0.76				0.72%
Ag 328.068†	48.3	0.00028	mg/L	0.000048	0.00697	mg/L	0.001195	17.13%
Al 308.215†	18274.0	10.26	mg/L	0.211	256.5	mg/L	5.27	2.05%
As 188.979†	1.6	0.01359	mg/L	0.001432	0.3397	mg/L	0.03581	10.54%
B 249.677†	16.8	0.00212	mg/L	0.000297	0.05312	mg/L	0.007436	14.00%
Ba 233.527†	758.2	0.1646	mg/L	0.00420	4.114	mg/L	0.1050	2.55%
Be 313.042†	273.4	0.00040	mg/L	0.000003	0.01005	mg/L	0.000066	0.66%
Ca 317.933†	71770.3	5.053	mg/L	0.1113	126.3	mg/L	2.78	2.20%
Cd 228.802†	206.8	0.00639	mg/L	0.000300	0.1597	mg/L	0.00751	4.70%
Co 228.616†	254.3	0.00611	mg/L	0.000352	0.1528	mg/L	0.00881	5.77%
Cr 267.716†	113.1	0.01834	mg/L	0.000407	0.4586	mg/L	0.01017	2.22%
Cu 324.752†	4046.4	0.01612	mg/L	0.000502	0.4031	mg/L	0.01255	3.11%
Fe 273.955†	20501.2	15.64	mg/L	0.311	390.9	mg/L	7.78	1.99%
K 766.490†	3170.9	1.591	mg/L	0.0330	39.77	mg/L	0.824	2.07%
Mg 279.077†	5949.6	4.026	mg/L	0.0876	100.7	mg/L	2.19	2.18%
Mn 257.610†	30005.1	0.8294	mg/L	0.01613	20.74	mg/L	0.403	1.95%
Mo 202.031†	6.0	0.00024	mg/L	0.000049	0.00604	mg/L	0.001227	20.33%
Na 589.592†	1421.5	0.1116	mg/L	0.00303	2.789	mg/L	0.0756	2.71%
Na 330.237†	-3.1	-0.1092	mg/L	0.07862	-2.731	mg/L	1.9656	71.98%
Ni 231.604†	68.1	0.01652	mg/L	0.001190	0.4129	mg/L	0.02976	7.21%
Pb 220.353†	2560.8	0.3219	mg/L	0.01264	8.047	mg/L	0.3160	3.93%
Sb 206.836†	3.4	0.00104	mg/L	0.000556	0.02598	mg/L	0.013899	53.49%
Se 196.026†	3.9	0.00258	mg/L	0.001108	0.06456	mg/L	0.027700	42.91%
Si 288.158†	281.0	0.1311	mg/L	0.00594	3.276	mg/L	0.1485	4.53%
Sn 189.927†	-7.7	-0.00127	mg/L	0.000459	-0.03170	mg/L	0.011486	36.23%
Sr 421.552†	51875.7	0.05538	mg/L	0.001177	1.384	mg/L	0.0294	2.12%
Ti 334.903†	9493.8	0.4553	mg/L	0.00925	11.38	mg/L	0.231	2.03%
Tl 190.801†	5.5	0.00370	mg/L	0.000800	0.09261	mg/L	0.019997	21.59%
V 292.402†	2466.2	0.01823	mg/L	0.000779	0.4558	mg/L	0.01946	4.27%
Zn 206.200†	1282.4	0.3164	mg/L	0.00787	7.909	mg/L	0.1967	2.49%

Sequence No.: 8
Sample ID: VR34 A SWC

Autosampler Location: 339
Date Collected: 11/16/2012 1:59:31 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2314300.0	102.5	%	0.92				0.90%
ScR 361.383	299174.6	104.6	%	0.71				0.68%
Ag 328.068†	110.7	0.00065	mg/L	0.000167	0.00327	mg/L	0.000836	25.58%
Al 308.215†	88802.6	49.86	mg/L	1.074	249.3	mg/L	5.37	2.15%
As 188.979†	4.5	0.06366	mg/L	0.001448	0.3183	mg/L	0.00724	2.27%
B 249.677†	86.3	0.01094	mg/L	0.000985	0.05468	mg/L	0.004924	9.00%
Ba 233.527†	3689.5	0.8009	mg/L	0.01287	4.004	mg/L	0.0644	1.61%
Be 313.042†	1248.5	0.00183	mg/L	0.000040	0.00916	mg/L	0.000202	2.20%
Ca 317.933†	352649.6	24.83	mg/L	0.517	124.1	mg/L	2.59	2.08%
Cd 228.802†	1112.9	0.03446	mg/L	0.001205	0.1723	mg/L	0.00603	3.50%
Co 228.616†	1293.6	0.03138	mg/L	0.000852	0.1569	mg/L	0.00426	2.72%
Cr 267.716†	578.6	0.09385	mg/L	0.002332	0.4692	mg/L	0.01166	2.48%
Cu 324.752†	20987.8	0.08346	mg/L	0.002414	0.4173	mg/L	0.01207	2.89%
Fe 273.955†	99522.2	75.91	mg/L	1.483	379.5	mg/L	7.41	1.95%
K 766.490†	15530.5	7.792	mg/L	0.1621	38.96	mg/L	0.811	2.08%
Mg 279.077†	27662.9	18.72	mg/L	0.361	93.59	mg/L	1.805	1.93%
Mn 257.610†	146171.2	4.041	mg/L	0.0760	20.20	mg/L	0.380	1.88%
Mo 202.031†	54.2	0.00243	mg/L	0.000284	0.01214	mg/L	0.001421	11.70%
Na 589.592†	6779.0	0.5321	mg/L	0.00845	2.660	mg/L	0.0422	1.59%
Na 330.237†	4.2	0.1332	mg/L	0.03323	0.6660	mg/L	0.16614	24.94%
Ni 231.604†	318.8	0.07737	mg/L	0.001789	0.3868	mg/L	0.00894	2.31%
Pb 220.353†	12668.8	1.592	mg/L	0.0437	7.961	mg/L	0.2186	2.75%
Sb 206.836†	31.4	0.00957	mg/L	0.001681	0.04786	mg/L	0.008405	17.56%
Se 196.026†	10.9	0.00724	mg/L	0.002799	0.03618	mg/L	0.013995	38.68%
Si 288.158†	1387.4	0.6470	mg/L	0.00376	3.235	mg/L	0.0188	0.58%
Sn 189.927†	-8.5	0.00127	mg/L	0.001245	0.00636	mg/L	0.006227	97.87%
Sr 421.552†	249751.0	0.2666	mg/L	0.00570	1.333	mg/L	0.0285	2.14%
Ti 334.903†	45757.7	2.194	mg/L	0.0445	10.97	mg/L	0.223	2.03%
Tl 190.801†	-12.5	0.00267	mg/L	0.003570	0.01337	mg/L	0.017851	133.52%
V 292.402†	12369.5	0.09158	mg/L	0.002581	0.4579	mg/L	0.01290	2.82%
Zn 206.200†	6290.9	1.552	mg/L	0.0246	7.759	mg/L	0.1228	1.58%

Sequence No.: 9
Sample ID: VR34 ADUP SWC

Autosampler Location: 340
Date Collected: 11/16/2012 2:03:32 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 ADUP SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2328273.0	103.1	%	1.06				1.03%
ScR 361.383	299292.2	104.7	%	1.05				1.00%
Ag 328.068†	108.1	0.00064	mg/L	0.000080	0.00321	mg/L	0.000401	12.49%
Al 308.215†	91719.1	51.50	mg/L	1.216	257.5	mg/L	6.08	2.36%
As 188.979†	8.2	0.07056	mg/L	0.003173	0.3528	mg/L	0.01587	4.50%
B 249.677†	97.2	0.01232	mg/L	0.001161	0.06162	mg/L	0.005804	9.42%
Ba 233.527†	3908.7	0.8489	mg/L	0.01979	4.245	mg/L	0.0990	2.33%
Be 313.042†	1296.8	0.00190	mg/L	0.000057	0.00951	mg/L	0.000284	2.99%
Ca 317.933†	382770.2	26.95	mg/L	0.496	134.7	mg/L	2.48	1.84%
Cd 228.802†	1255.8	0.03895	mg/L	0.000370	0.1947	mg/L	0.00185	0.95%
Co 228.616†	1350.5	0.03263	mg/L	0.000577	0.1631	mg/L	0.00289	1.77%
Cr 267.716†	619.7	0.1004	mg/L	0.00378	0.5021	mg/L	0.01891	3.77%
Cu 324.752†	24044.6	0.09524	mg/L	0.001394	0.4762	mg/L	0.00697	1.46%
Fe 273.955†	101505.6	77.42	mg/L	1.462	387.1	mg/L	7.31	1.89%
K 766.490†	16343.3	8.200	mg/L	0.1846	41.00	mg/L	0.923	2.25%
Mg 279.077†	28737.7	19.45	mg/L	0.386	97.23	mg/L	1.930	1.98%
Mn 257.610†	155887.1	4.309	mg/L	0.0892	21.55	mg/L	0.446	2.07%
Mo 202.031†	59.0	0.00264	mg/L	0.000292	0.01322	mg/L	0.001461	11.05%
Na 589.592†	6794.0	0.5332	mg/L	0.00972	2.666	mg/L	0.0486	1.82%
Na 330.237†	5.1	0.1452	mg/L	0.03203	0.7260	mg/L	0.16017	22.06%
Ni 231.604†	334.4	0.08114	mg/L	0.002222	0.4057	mg/L	0.01111	2.74%
Pb 220.353†	14247.3	1.790	mg/L	0.0223	8.949	mg/L	0.1116	1.25%
Sb 206.836†	40.5	0.01236	mg/L	0.000412	0.06178	mg/L	0.002060	3.33%
Se 196.026†	9.8	0.00649	mg/L	0.002224	0.03243	mg/L	0.011120	34.29%
Si 288.158†	1474.7	0.6877	mg/L	0.01993	3.438	mg/L	0.0997	2.90%
Sn 189.927†	-8.1	0.00165	mg/L	0.001594	0.00826	mg/L	0.007971	96.46%
Sr 421.552†	274886.8	0.2934	mg/L	0.00668	1.467	mg/L	0.0334	2.28%
Ti 334.903†	49439.8	2.371	mg/L	0.0514	11.85	mg/L	0.257	2.17%
Tl 190.801†	-5.3	0.00563	mg/L	0.002162	0.02815	mg/L	0.010810	38.40%
V 292.402†	13265.5	0.09834	mg/L	0.001224	0.4917	mg/L	0.00612	1.25%
Zn 206.200†	7029.2	1.734	mg/L	0.0404	8.670	mg/L	0.2019	2.33%

Sequence No.: 10
Sample ID: VR34 ASPK SWC

Autosampler Location: 341
Date Collected: 11/16/2012 2:07:33 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2290384.9	101.5	%	0.37				0.36%
ScR 361.383	296734.1	103.8	%	1.44				1.38%
Ag 328.068†	32996.7	0.1868	mg/L	0.00262	0.9340	mg/L	0.01311	1.40%
Al 308.215†	93533.3	52.51	mg/L	0.211	262.6	mg/L	1.05	0.40%
As 188.979†	1372.5	0.7891	mg/L	0.00765	3.945	mg/L	0.0382	0.97%
B 249.677†	100.0	0.01229	mg/L	0.000815	0.06144	mg/L	0.004077	6.64%
Ba 233.527†	7414.0	1.622	mg/L	0.0065	8.110	mg/L	0.0325	0.40%
Be 313.042†	126141.7	0.1896	mg/L	0.00033	0.9480	mg/L	0.00165	0.17%
Ca 317.933†	425417.8	29.95	mg/L	0.142	149.8	mg/L	0.71	0.48%
Cd 228.802†	7795.9	0.2408	mg/L	0.00280	1.204	mg/L	0.0140	1.16%
Co 228.616†	8163.2	0.2260	mg/L	0.00254	1.130	mg/L	0.0127	1.12%
Cr 267.716†	1883.8	0.3034	mg/L	0.00157	1.517	mg/L	0.0079	0.52%
Cu 324.752†	75506.6	0.2931	mg/L	0.00421	1.465	mg/L	0.0211	1.44%
Fe 273.955†	98694.8	75.27	mg/L	0.279	376.4	mg/L	1.39	0.37%
K 766.490†	24224.1	12.15	mg/L	0.067	60.77	mg/L	0.333	0.55%
Mg 279.077†	34975.6	23.68	mg/L	0.122	118.4	mg/L	0.61	0.52%
Mn 257.610†	157250.6	4.347	mg/L	0.0137	21.74	mg/L	0.068	0.31%
Mo 202.031†	59.3	0.00262	mg/L	0.000192	0.01309	mg/L	0.000958	7.32%
Na 589.592†	54201.4	4.254	mg/L	0.0100	21.27	mg/L	0.050	0.24%
Na 330.237†	128.6	4.371	mg/L	0.0491	21.85	mg/L	0.246	1.12%
Ni 231.604†	1111.1	0.2693	mg/L	0.00161	1.346	mg/L	0.0081	0.60%
Pb 220.353†	19972.9	2.506	mg/L	0.0340	12.53	mg/L	0.170	1.36%
Sb 206.836†	39.1	0.00968	mg/L	0.000339	0.04839	mg/L	0.001696	3.51%
Se 196.026†	1097.9	0.7371	mg/L	0.00804	3.686	mg/L	0.0402	1.09%
Si 288.158†	1363.5	0.6373	mg/L	0.00085	3.186	mg/L	0.0043	0.13%
Sn 189.927†	-16.2	-0.00004	mg/L	0.001009	-0.00020	mg/L	0.005047	>999.9%
Sr 421.552†	444789.2	0.4748	mg/L	0.00124	2.374	mg/L	0.0062	0.26%
Ti 334.903†	46940.6	2.251	mg/L	0.0058	11.25	mg/L	0.029	0.26%
Tl 190.801†	1800.1	0.7098	mg/L	0.00710	3.549	mg/L	0.0355	1.00%
V 292.402†	37360.2	0.2833	mg/L	0.00412	1.417	mg/L	0.0206	1.46%
Zn 206.200†	7574.0	1.868	mg/L	0.0044	9.342	mg/L	0.0222	0.24%

Sequence No.: 11
Sample ID: ~~VR34 APOST SWC~~ zzzzzz
Dilution: 5.000000X

Autosampler Location: 342
Date Collected: 11/16/2012 2:11:35 PM
Data Type: Original

Nebulizer Parameters: VR34 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR34 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2351668.7	104.2	%	1.12				1.08%
ScR 361.383	301301.7	105.4	%	0.66				0.63%
Ag 328.068†	90584.6	0.5128	mg/L	0.01477	2.564	mg/L	0.0739	2.88%
Al 308.215†	87509.6	49.13	mg/L	0.731	245.6	mg/L	3.66	1.49%
As 188.979†	3830.6	2.085	mg/L	0.0554	10.43	mg/L	0.277	2.65%
B 249.677†	92.9	0.01073	mg/L	0.001663	0.05367	mg/L	0.008317	15.50%
Ba 233.527†	12354.2	2.711	mg/L	0.0192	13.56	mg/L	0.096	0.71%
Be 313.042†	313224.6	0.4708	mg/L	0.00931	2.354	mg/L	0.0466	1.98%
Ca 317.933†	469111.1	33.03	mg/L	0.137	165.1	mg/L	0.68	0.41%
Cd 228.802†	18408.5	0.5673	mg/L	0.01651	2.837	mg/L	0.0826	2.91%
Co 228.616†	19387.5	0.5446	mg/L	0.01510	2.723	mg/L	0.0755	2.77%
Cr 267.716†	3602.1	0.5796	mg/L	0.00520	2.898	mg/L	0.0260	0.90%
Cu 324.752†	159541.0	0.6162	mg/L	0.01469	3.081	mg/L	0.0735	2.38%
Fe 273.955†	96809.2	73.83	mg/L	0.954	369.2	mg/L	4.77	1.29%
K 766.490†	33631.6	16.87	mg/L	0.047	84.37	mg/L	0.233	0.28%
Mg 279.077†	40059.2	27.13	mg/L	0.101	135.6	mg/L	0.51	0.37%
Mn 257.610†	155432.3	4.297	mg/L	0.0467	21.48	mg/L	0.233	1.09%
Mo 202.031†	63.4	0.00277	mg/L	0.000063	0.01385	mg/L	0.000317	2.29%
Na 589.592†	122990.0	9.653	mg/L	0.1164	48.26	mg/L	0.582	1.21%
Na 330.237†	296.0	10.14	mg/L	0.069	50.72	mg/L	0.344	0.68%
Ni 231.604†	2196.5	0.5321	mg/L	0.00391	2.661	mg/L	0.0195	0.73%
Pb 220.353†	27814.8	3.485	mg/L	0.0501	17.43	mg/L	0.250	1.44%
Sb 206.836†	48.1	0.00963	mg/L	0.001524	0.04816	mg/L	0.007622	15.83%
Se 196.026†	3057.3	2.053	mg/L	0.0575	10.26	mg/L	0.287	2.80%
Si 288.158†	1303.7	0.6111	mg/L	0.01168	3.056	mg/L	0.0584	1.91%
Sn 189.927†	-18.4	-0.00021	mg/L	0.000201	-0.00103	mg/L	0.001003	97.83%
Sr 421.552†	667661.5	0.7127	mg/L	0.00388	3.564	mg/L	0.0194	0.54%
Ti 334.903†	43476.0	2.084	mg/L	0.0305	10.42	mg/L	0.152	1.46%
Tl 190.801†	4964.5	1.944	mg/L	0.0569	9.722	mg/L	0.2845	2.93%
V 292.402†	79121.9	0.6035	mg/L	0.01479	3.018	mg/L	0.0740	2.45%
Zn 206.200†	7764.9	1.916	mg/L	0.0232	9.578	mg/L	0.1162	1.21%

Sequence No.: 12
Sample ID: VR34 MB1SPK SWC

Autosampler Location: 343
Date Collected: 11/16/2012 2:15:37 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR34 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2267576.0	100.5	%	0.52				0.52%
ScR 361.383	289336.8	101.2	%	1.47				1.45%
Ag 328.068†	87075.9	0.4929	mg/L	0.01242	0.9858	mg/L	0.02484	2.52%
Al 308.215†	3619.1	2.025	mg/L	0.0272	4.050	mg/L	0.0544	1.34%
As 188.979†	3544.4	1.876	mg/L	0.0545	3.751	mg/L	0.1091	2.91%
B 249.677†	9.7	0.00023	mg/L	0.000794	0.00046	mg/L	0.001589	344.06%
Ba 233.527†	9278.7	2.045	mg/L	0.0226	4.090	mg/L	0.0453	1.11%
Be 313.042†	329497.0	0.4954	mg/L	0.00461	0.9907	mg/L	0.00922	0.93%
Ca 317.933†	141179.6	9.939	mg/L	0.1091	19.88	mg/L	0.218	1.10%
Cd 228.802†	16511.7	0.5091	mg/L	0.01473	1.018	mg/L	0.0295	2.89%
Co 228.616†	17324.0	0.4911	mg/L	0.01328	0.9821	mg/L	0.02655	2.70%
Cr 267.716†	3208.6	0.5155	mg/L	0.00672	1.031	mg/L	0.0134	1.30%
Cu 324.752†	123950.8	0.4767	mg/L	0.01514	0.9535	mg/L	0.03028	3.18%
Fe 273.955†	2727.6	2.077	mg/L	0.0333	4.154	mg/L	0.0665	1.60%
K 766.490†	19835.7	9.952	mg/L	0.1670	19.90	mg/L	0.334	1.68%
Mg 279.077†	15100.3	10.24	mg/L	0.117	20.48	mg/L	0.235	1.15%
Mn 257.610†	18637.2	0.5155	mg/L	0.00669	1.031	mg/L	0.0134	1.30%
Mo 202.031†	15.9	0.00066	mg/L	0.000084	0.00132	mg/L	0.000168	12.78%
Na 589.592†	123189.7	9.669	mg/L	0.1194	19.34	mg/L	0.239	1.23%
Na 330.237†	287.1	9.831	mg/L	0.2926	19.66	mg/L	0.585	2.98%
Ni 231.604†	1998.7	0.4842	mg/L	0.00527	0.9684	mg/L	0.01055	1.09%
Pb 220.353†	15033.6	1.880	mg/L	0.0481	3.759	mg/L	0.0962	2.56%
Sb 206.836†	18.8	0.00021	mg/L	0.001722	0.00042	mg/L	0.003445	815.71%
Se 196.026†	2825.6	1.897	mg/L	0.0604	3.795	mg/L	0.1208	3.18%
Si 288.158†	-8.1	-0.00065	mg/L	0.001867	-0.00130	mg/L	0.003733	287.48%
Sn 189.927†	-23.9	-0.00485	mg/L	0.000639	-0.00969	mg/L	0.001278	13.19%
Sr 421.552†	457551.1	0.4884	mg/L	0.00575	0.9769	mg/L	0.01150	1.18%
Ti 334.903†	57.0	0.00216	mg/L	0.000258	0.00432	mg/L	0.000515	11.94%
Tl 190.801†	4688.3	1.829	mg/L	0.0526	3.659	mg/L	0.1051	2.87%
V 292.402†	63899.3	0.4901	mg/L	0.01248	0.9803	mg/L	0.02495	2.55%
Zn 206.200†	1977.5	0.4879	mg/L	0.00532	0.9757	mg/L	0.01064	1.09%

Sequence No.: 13
Sample ID: CV9
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 2:19:38 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2303611.5	102.1	%	1.41				1.38%
ScR 361.383	286578.5	100.2	%	0.78				0.78%
Ag 328.068†	168518.2	0.9539	mg/L	0.02429	0.9539	mg/L	0.02429	2.55%
Al 308.215†	3600.3	1.987	mg/L	0.0311	1.987	mg/L	0.0311	1.56%
As 188.979†	3634.5	1.950	mg/L	0.0265	1.950	mg/L	0.0265	1.36%
B 249.677†	7509.3	0.9575	mg/L	0.01257	0.9575	mg/L	0.01257	1.31%
Ba 233.527†	4630.9	1.020	mg/L	0.0095	1.020	mg/L	0.0095	0.93%
Be 313.042†	642288.1	0.9656	mg/L	0.00731	0.9656	mg/L	0.00731	0.76%
Ca 317.933†	29093.1	2.048	mg/L	0.0222	2.048	mg/L	0.0222	1.08%
Cd 228.802†	32544.7	1.015	mg/L	0.0224	1.015	mg/L	0.0224	2.20%
Co 228.616†	35274.3	0.9983	mg/L	0.02238	0.9983	mg/L	0.02238	2.24%
Cr 267.716†	6359.7	1.023	mg/L	0.0100	1.023	mg/L	0.0100	0.98%
Cu 324.752†	256392.8	0.9856	mg/L	0.02327	0.9856	mg/L	0.02327	2.36%
Fe 273.955†	2711.3	2.061	mg/L	0.0286	2.061	mg/L	0.0286	1.39%
K 766.490†	40019.4	20.08	mg/L	0.097	20.08	mg/L	0.097	0.48%
Mg 279.077†	2977.9	2.027	mg/L	0.0190	2.027	mg/L	0.0190	0.94%
Mn 257.610†	37488.2	1.037	mg/L	0.0122	1.037	mg/L	0.0122	1.17%
Mo 202.031†	20325.9	1.013	mg/L	0.0124	1.013	mg/L	0.0124	1.22%
Na 589.592†	627947.3	49.29	mg/L	0.327	49.29	mg/L	0.327	0.66%
Na 330.237†	1479.6	51.40	mg/L	0.244	51.40	mg/L	0.244	0.48%
Ni 231.604†	3989.9	0.9684	mg/L	0.00779	0.9684	mg/L	0.00779	0.80%
Pb 220.353†	15840.5	1.981	mg/L	0.0238	1.981	mg/L	0.0238	1.20%
Sb 206.836†	6827.4	2.087	mg/L	0.0295	2.087	mg/L	0.0295	1.41%
Se 196.026†	2855.0	1.917	mg/L	0.0250	1.917	mg/L	0.0250	1.30%
Si 288.158†	4453.6	2.069	mg/L	0.0323	2.069	mg/L	0.0323	1.56%
Sn 189.927†	3907.7	1.004	mg/L	0.0140	1.004	mg/L	0.0140	1.39%
Sr 421.552†	903823.6	0.9649	mg/L	0.00632	0.9649	mg/L	0.00632	0.66%
Ti 334.903†	22054.1	1.057	mg/L	0.0113	1.057	mg/L	0.0113	1.07%
Tl 190.801†	4917.4	1.915	mg/L	0.0253	1.915	mg/L	0.0253	1.32%
V 292.402†	128984.3	0.9894	mg/L	0.02351	0.9894	mg/L	0.02351	2.38%
Zn 206.200†	4067.0	1.003	mg/L	0.0101	1.003	mg/L	0.0101	1.01%

Sequence No.: 14
Sample ID: CB 9
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 2:23:45 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311198.6	102.4	%	0.12				0.12%
ScR 361.383	290895.3	101.7	%	0.80				0.79%
Ag 328.068†	35.9	0.00020	mg/L	0.000128	0.00020	mg/L	0.000128	63.16%
Al 308.215†	19.6	0.01102	mg/L	0.005135	0.01102	mg/L	0.005135	46.59%
As 188.979†	-2.0	-0.00106	mg/L	0.001698	-0.00106	mg/L	0.001698	160.83%
B 249.677†	9.7	0.00124	mg/L	0.000912	0.00124	mg/L	0.000912	73.47%
Ba 233.527†	1.2	0.00026	mg/L	0.000738	0.00026	mg/L	0.000738	279.83%
Be 313.042†	174.5	0.00026	mg/L	0.000048	0.00026	mg/L	0.000048	18.43%
Ca 317.933†	38.0	0.00268	mg/L	0.000640	0.00268	mg/L	0.000640	23.94%
Cd 228.802†	-7.9	-0.00024	mg/L	0.000108	-0.00024	mg/L	0.000108	44.71%
Co 228.616†	-4.0	-0.00011	mg/L	0.000092	-0.00011	mg/L	0.000092	80.39%
Cr 267.716†	-3.0	-0.00049	mg/L	0.000718	-0.00049	mg/L	0.000718	147.19%
Cu 324.752†	-53.2	-0.00020	mg/L	0.000194	-0.00020	mg/L	0.000194	94.93%
Fe 273.955†	10.5	0.00801	mg/L	0.001908	0.00801	mg/L	0.001908	23.83%
K 766.490†	-12.2	-0.00611	mg/L	0.020361	-0.00611	mg/L	0.020361	333.37%
Mg 279.077†	2.5	0.00168	mg/L	0.003745	0.00168	mg/L	0.003745	222.53%
Mn 257.610†	4.3	0.00012	mg/L	0.000108	0.00012	mg/L	0.000108	90.44%
Mo 202.031†	13.2	0.00066	mg/L	0.000250	0.00066	mg/L	0.000250	38.20%
Na 589.592†	124.7	0.00978	mg/L	0.004186	0.00978	mg/L	0.004186	42.79%
Na 330.237†	-0.4	-0.01519	mg/L	0.330429	-0.01519	mg/L	0.330429	>999.9%
Ni 231.604†	-1.1	-0.00028	mg/L	0.000775	-0.00028	mg/L	0.000775	279.60%
Pb 220.353†	-1.3	-0.00016	mg/L	0.000548	-0.00016	mg/L	0.000548	351.13%
Sb 206.836†	8.5	0.00261	mg/L	0.001787	0.00261	mg/L	0.001787	68.50%
Se 196.026†	1.5	0.00101	mg/L	0.002227	0.00101	mg/L	0.002227	220.16%
Si 288.158†	6.7	0.00311	mg/L	0.000885	0.00311	mg/L	0.000885	28.47%
Sn 189.927†	-3.2	-0.00082	mg/L	0.000249	-0.00082	mg/L	0.000249	30.40%
Sr 421.552†	252.5	0.00027	mg/L	0.000039	0.00027	mg/L	0.000039	14.60%
Ti 334.903†	16.7	0.00080	mg/L	0.000550	0.00080	mg/L	0.000550	68.72%
Tl 190.801†	3.3	0.00131	mg/L	0.000650	0.00131	mg/L	0.000650	49.71%
V 292.402†	-29.3	-0.00023	mg/L	0.000030	-0.00023	mg/L	0.000030	13.27%
Zn 206.200†	-1.2	-0.00029	mg/L	0.000488	-0.00029	mg/L	0.000488	165.87%

Sequence No.: 15
Sample ID: VR33 MB1 SWC

Autosampler Location: 344
Date Collected: 11/16/2012 2:28:01 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR33 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	Sample RSD
ScA 357.253	2303307.5	102.0	%	1.71				1.68%
ScR 361.383	300037.2	104.9	%	0.62				0.59%
Ag 328.068†	25.8	0.00015	mg/L	0.000211	0.00029	mg/L	0.000423	144.94%
Al 308.215†	18.5	0.01040	mg/L	0.008747	0.02080	mg/L	0.017494	84.10%
As 188.979†	-2.4	-0.00124	mg/L	0.000890	-0.00248	mg/L	0.001780	71.92%
B 249.677†	5.4	0.00070	mg/L	0.000542	0.00139	mg/L	0.001084	77.87%
Ba 233.527†	-2.9	-0.00065	mg/L	0.000719	-0.00129	mg/L	0.001438	111.16%
Be 313.042†	26.6	0.00004	mg/L	0.000009	0.00008	mg/L	0.000019	23.24%
Ca 317.933†	80.7	0.00568	mg/L	0.000726	0.01137	mg/L	0.001451	12.76%
Cd 228.802†	-16.6	-0.00051	mg/L	0.000120	-0.00103	mg/L	0.000239	23.28%
Co 228.616†	-14.4	-0.00041	mg/L	0.000185	-0.00082	mg/L	0.000371	44.99%
Cr 267.716†	-9.7	-0.00156	mg/L	0.000722	-0.00312	mg/L	0.001443	46.25%
Cu 324.752†	-81.5	-0.00031	mg/L	0.000108	-0.00063	mg/L	0.000216	34.44%
Fe 273.955†	10.5	0.00802	mg/L	0.000313	0.01605	mg/L	0.000626	3.90%
K 766.490†	-33.3	-0.01670	mg/L	0.021499	-0.03340	mg/L	0.042997	128.72%
Mg 279.077†	0.3	0.00020	mg/L	0.000867	0.00040	mg/L	0.001733	437.49%
Mn 257.610†	-5.7	-0.00016	mg/L	0.000058	-0.00031	mg/L	0.000116	36.88%
Mo 202.031†	-0.6	-0.00003	mg/L	0.000078	-0.00006	mg/L	0.000156	250.42%
Na 589.592†	22.2	0.00174	mg/L	0.003715	0.00348	mg/L	0.007429	213.42%
Na 330.237†	2.6	0.08880	mg/L	0.033144	0.1776	mg/L	0.06629	37.33%
Ni 231.604†	0.9	0.00022	mg/L	0.000944	0.00044	mg/L	0.001888	433.79%
Pb 220.353†	-0.8	-0.00010	mg/L	0.000634	-0.00020	mg/L	0.001267	648.83%
Sb 206.836†	-2.8	-0.00083	mg/L	0.000631	-0.00165	mg/L	0.001262	76.38%
Se 196.026†	3.8	0.00253	mg/L	0.003651	0.00507	mg/L	0.007301	144.11%
Si 288.158†	-1.4	-0.00067	mg/L	0.002745	-0.00133	mg/L	0.005489	411.18%
Sn 189.927†	-2.7	-0.00070	mg/L	0.000635	-0.00141	mg/L	0.001271	90.29%
Sr 421.552†	43.6	0.00005	mg/L	0.000030	0.00009	mg/L	0.000060	64.64%
Ti 334.903†	26.7	0.00128	mg/L	0.000205	0.00256	mg/L	0.000411	16.04%
Tl 190.801†	2.2	0.00087	mg/L	0.001734	0.00174	mg/L	0.003468	199.80%
V 292.402†	-24.8	-0.00020	mg/L	0.000184	-0.00039	mg/L	0.000367	93.23%
Zn 206.200†	2.9	0.00072	mg/L	0.000264	0.00144	mg/L	0.000529	36.72%

Sequence No.: 16
Sample ID: VR33 B SWC

Autosampler Location: 345
Date Collected: 11/16/2012 2:32:18 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2219830.9	98.34	%	0.126				0.13%
ScR 361.383	286637.4	100.2	%	1.57				1.56%
Ag 328.068†	-92.2	-0.00049	mg/L	0.000097	-0.00245	mg/L	0.000487	19.86%
Al 308.215†	105103.1	59.01	mg/L	1.307	295.1	mg/L	6.54	2.22%
As 188.979†	-62.7	0.03511	mg/L	0.003115	0.1755	mg/L	0.01557	8.87%
B 249.677†	80.1	0.01016	mg/L	0.000293	0.05079	mg/L	0.001466	2.89%
Ba 233.527†	5809.2	1.270	mg/L	0.0247	6.348	mg/L	0.1233	1.94%
Be 313.042†	1350.3	0.00198	mg/L	0.000057	0.00990	mg/L	0.000287	2.90%
Ca 317.933†	286177.4	20.15	mg/L	0.473	100.7	mg/L	2.36	2.35%
Cd 228.802†	543.4	0.01678	mg/L	0.000181	0.08388	mg/L	0.000907	1.08%
Co 228.616†	1056.1	0.02427	mg/L	0.000283	0.1214	mg/L	0.00142	1.17%
Cr 267.716†	493.1	0.08011	mg/L	0.001290	0.4006	mg/L	0.00645	1.61%
Cu 324.752†	14918.8	0.05971	mg/L	0.000490	0.2986	mg/L	0.00245	0.82%
Fe 273.955†	88142.6	67.23	mg/L	1.698	336.1	mg/L	8.49	2.53%
K 766.490†	11716.1	5.878	mg/L	0.1287	29.39	mg/L	0.643	2.19%
Mg 279.077†	22890.8	15.49	mg/L	0.357	77.44	mg/L	1.786	2.31%
Mn 257.610†	132123.8	3.652	mg/L	0.0893	18.26	mg/L	0.447	2.45%
Mo 202.031†	52.9	0.00242	mg/L	0.000475	0.01208	mg/L	0.002375	19.66%
Na 589.592†	9514.1	0.7467	mg/L	0.01571	3.734	mg/L	0.0786	2.10%
Na 330.237†	-4.1	0.09450	mg/L	0.366734	0.4725	mg/L	1.83367	388.09%
Ni 231.604†	224.0	0.05436	mg/L	0.000419	0.2718	mg/L	0.00209	0.77%
Pb 220.353†	6357.5	0.8060	mg/L	0.00286	4.030	mg/L	0.0143	0.35%
Sb 206.836†	15.9	0.00514	mg/L	0.002021	0.02568	mg/L	0.010104	39.35%
Se 196.026†	8.2	0.00544	mg/L	0.005339	0.02722	mg/L	0.026697	98.06%
Si 288.158†	3703.8	1.723	mg/L	0.0212	8.614	mg/L	0.1060	1.23%
Sn 189.927†	-28.3	-0.00439	mg/L	0.000970	-0.02195	mg/L	0.004850	22.09%
Sr 421.552†	250087.6	0.2670	mg/L	0.00580	1.335	mg/L	0.0290	2.17%
Ti 334.903†	50670.2	2.430	mg/L	0.0576	12.15	mg/L	0.288	2.37%
Tl 190.801†	-7.8	0.00356	mg/L	0.001600	0.01778	mg/L	0.008000	45.00%
V 292.402†	14351.5	0.1068	mg/L	0.00057	0.5338	mg/L	0.00283	0.53%
Zn 206.200†	3880.5	0.9573	mg/L	0.01841	4.786	mg/L	0.0920	1.92%

Sequence No.: 17
Sample ID: VR33 C SWC

Autosampler Location: 346
Date Collected: 11/16/2012 2:36:19 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2181297.6	96.64	%	1.797				1.86%
ScR 361.383	283698.7	99.22	%	2.024				2.04%
Ag 328.068†	-161.7	-0.00086	mg/L	0.000023	-0.00429	mg/L	0.000117	2.72%
Al 308.215†	155053.6	87.05	mg/L	1.240	435.3	mg/L	6.20	1.42%
As 188.979†	-112.4	0.07619	mg/L	0.001217	0.3810	mg/L	0.00609	1.60%
B 249.677†	140.0	0.01766	mg/L	0.000908	0.08832	mg/L	0.004542	5.14%
Ba 233.527†	14908.5	3.261	mg/L	0.0705	16.31	mg/L	0.353	2.16%
Be 313.042†	2223.3	0.00325	mg/L	0.000092	0.01623	mg/L	0.000458	2.82%
Ca 317.933†	850767.8	59.90	mg/L	0.929	299.5	mg/L	4.64	1.55%
Cd 228.802†	990.8	0.03048	mg/L	0.001102	0.1524	mg/L	0.00551	3.61%
Co 228.616†	3667.5	0.09227	mg/L	0.002238	0.4614	mg/L	0.01119	2.43%
Cr 267.716†	2576.9	0.4149	mg/L	0.00842	2.075	mg/L	0.0421	2.03%
Cu 324.752†	46787.0	0.1853	mg/L	0.00396	0.9264	mg/L	0.01981	2.14%
Fe 273.955†	202219.2	154.2	mg/L	2.10	771.2	mg/L	10.51	1.36%
K 766.490†	37180.1	18.65	mg/L	0.207	93.27	mg/L	1.037	1.11%
Mg 279.077†	80272.5	54.35	mg/L	0.810	271.8	mg/L	4.05	1.49%
Mn 257.610†	263319.7	7.279	mg/L	0.1013	36.39	mg/L	0.506	1.39%
Mo 202.031†	116.6	0.00514	mg/L	0.000312	0.02571	mg/L	0.001560	6.07%
Na 589.592†	5965.3	0.4682	mg/L	0.00837	2.341	mg/L	0.0419	1.79%
Na 330.237†	-26.4	-0.3796	mg/L	0.15098	-1.898	mg/L	0.7549	39.77%
Ni 231.604†	1270.9	0.3084	mg/L	0.00484	1.542	mg/L	0.0242	1.57%
Pb 220.353†	10893.8	1.376	mg/L	0.0283	6.882	mg/L	0.1414	2.06%
Sb 206.836†	35.7	0.00776	mg/L	0.001053	0.03879	mg/L	0.005267	13.58%
Se 196.026†	9.7	0.00635	mg/L	0.002210	0.03176	mg/L	0.011049	34.79%
Si 288.158†	2309.5	1.080	mg/L	0.0222	5.398	mg/L	0.1108	2.05%
Sn 189.927†	-21.2	0.00272	mg/L	0.001641	0.01358	mg/L	0.008205	60.40%
Sr 421.552†	466051.7	0.4975	mg/L	0.00641	2.488	mg/L	0.0320	1.29%
Ti 334.903†	101749.7	4.879	mg/L	0.0730	24.40	mg/L	0.365	1.50%
Tl 190.801†	-33.1	0.00215	mg/L	0.001727	0.01077	mg/L	0.008637	80.22%
V 292.402†	25525.8	0.1897	mg/L	0.00409	0.9483	mg/L	0.02046	2.16%
Zn 206.200†	7042.6	1.737	mg/L	0.0359	8.686	mg/L	0.1796	2.07%

Sequence No.: 18
Sample ID: VR33 D SWC

Autosampler Location: 347
Date Collected: 11/16/2012 2:40:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2191568.1	97.09	%	1.772				1.83%
ScR 361.383	279449.2	97.73	%	1.708				1.75%
Ag 328.068†	-84.8	-0.00044	mg/L	0.000218	-0.00219	mg/L	0.001092	49.77%
Al 308.215†	122049.4	68.53	mg/L	1.449	342.6	mg/L	7.25	2.11%
As 188.979†	-31.1	0.06484	mg/L	0.002648	0.3242	mg/L	0.01324	4.08%
B 249.677†	79.1	0.00999	mg/L	0.000330	0.04995	mg/L	0.001648	3.30%
Ba 233.527†	5498.0	1.197	mg/L	0.0265	5.983	mg/L	0.1323	2.21%
Be 313.042†	1493.3	0.00218	mg/L	0.000080	0.01091	mg/L	0.000399	3.66%
Ca 317.933†	331318.6	23.33	mg/L	0.433	116.6	mg/L	2.17	1.86%
Cd 228.802†	844.1	0.02593	mg/L	0.000562	0.1296	mg/L	0.00281	2.17%
Co 228.616†	1860.3	0.04584	mg/L	0.000989	0.2292	mg/L	0.00495	2.16%
Cr 267.716†	747.3	0.1215	mg/L	0.00267	0.6077	mg/L	0.01337	2.20%
Cu 324.752†	27057.1	0.1074	mg/L	0.00163	0.5372	mg/L	0.00814	1.52%
Fe 273.955†	123089.0	93.88	mg/L	1.801	469.4	mg/L	9.00	1.92%
K 766.490†	22932.9	11.51	mg/L	0.207	57.53	mg/L	1.036	1.80%
Mg 279.077†	31216.4	21.12	mg/L	0.418	105.6	mg/L	2.09	1.98%
Mn 257.610†	129888.2	3.590	mg/L	0.0688	17.95	mg/L	0.344	1.91%
Mo 202.031†	73.6	0.00341	mg/L	0.000275	0.01704	mg/L	0.001377	8.08%
Na 589.592†	7004.8	0.5498	mg/L	0.00892	2.749	mg/L	0.0446	1.62%
Na 330.237†	-21.0	-0.4676	mg/L	0.14319	-2.338	mg/L	0.7160	30.62%
Ni 231.604†	355.6	0.08629	mg/L	0.001285	0.4315	mg/L	0.00642	1.49%
Pb 220.353†	7076.7	0.8970	mg/L	0.01690	4.485	mg/L	0.0845	1.88%
Sb 206.836†	27.0	0.00827	mg/L	0.001708	0.04136	mg/L	0.008539	20.65%
Se 196.026†	5.3	0.00345	mg/L	0.002707	0.01725	mg/L	0.013533	78.43%
Si 288.158†	3254.8	1.515	mg/L	0.0370	7.574	mg/L	0.1851	2.44%
Sn 189.927†	-30.9	-0.00458	mg/L	0.001453	-0.02292	mg/L	0.007263	31.69%
Sr 421.552†	192031.9	0.2050	mg/L	0.00396	1.025	mg/L	0.0198	1.93%
Ti 334.903†	60285.5	2.891	mg/L	0.0571	14.46	mg/L	0.285	1.97%
Tl 190.801†	-13.7	0.00387	mg/L	0.001335	0.01937	mg/L	0.006676	34.46%
V 292.402†	18696.7	0.1389	mg/L	0.00206	0.6946	mg/L	0.01031	1.48%
Zn 206.200†	4842.1	1.194	mg/L	0.0284	5.972	mg/L	0.1421	2.38%

Sequence No.: 19
Sample ID: VR33 A-L SWC

Autosampler Location: 348
Date Collected: 11/16/2012 2:44:08 PM
Data Type: Original

Dilution: 25.000000X

Nebulizer Parameters: VR33 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2193796.2	97.19	%	0.834				0.86%
ScR 361.383	277795.2	97.16	%	1.767				1.82%
Ag 328.068†	26.5	0.00016	mg/L	0.000231	0.00390	mg/L	0.005781	148.38%
Al 308.215†	21514.8	12.08	mg/L	0.223	302.0	mg/L	5.58	1.85%
As 188.979†	-0.7	0.01322	mg/L	0.000993	0.3304	mg/L	0.02482	7.51%
B 249.677†	26.5	0.00337	mg/L	0.000864	0.08417	mg/L	0.021601	25.66%
Ba 233.527†	1135.7	0.2479	mg/L	0.00490	6.197	mg/L	0.1226	1.98%
Be 313.042†	345.4	0.00051	mg/L	0.000007	0.01274	mg/L	0.000163	1.28%
Ca 317.933†	93204.8	6.562	mg/L	0.1180	164.0	mg/L	2.95	1.80%
Cd 228.802†	224.0	0.00694	mg/L	0.000228	0.1736	mg/L	0.00570	3.28%
Co 228.616†	251.0	0.00596	mg/L	0.000289	0.1490	mg/L	0.00722	4.85%
Cr 267.716†	95.0	0.01538	mg/L	0.000584	0.3845	mg/L	0.01459	3.79%
Cu 324.752†	6296.5	0.02474	mg/L	0.000456	0.6185	mg/L	0.01140	1.84%
Fe 273.955†	19586.8	14.94	mg/L	0.322	373.5	mg/L	8.05	2.16%
K 766.490†	2963.1	1.487	mg/L	0.0066	37.17	mg/L	0.166	0.45%
Mg 279.077†	5876.9	3.977	mg/L	0.0681	99.43	mg/L	1.703	1.71%
Mn 257.610†	32754.0	0.9054	mg/L	0.01885	22.64	mg/L	0.471	2.08%
Mo 202.031†	12.3	0.00054	mg/L	0.000218	0.01358	mg/L	0.005444	40.08%
Na 589.592†	1728.9	0.1357	mg/L	0.00536	3.392	mg/L	0.1339	3.95%
Na 330.237†	-22.2	-0.7719	mg/L	0.10653	-19.30	mg/L	2.663	13.80%
Ni 231.604†	66.3	0.01608	mg/L	0.001396	0.4020	mg/L	0.03491	8.68%
Pb 220.353†	2999.5	0.3771	mg/L	0.00558	9.428	mg/L	0.1394	1.48%
Sb 206.836†	8.0	0.00250	mg/L	0.000705	0.06242	mg/L	0.017634	28.25%
Se 196.026†	0.9	0.00059	mg/L	0.002488	0.01479	mg/L	0.062200	420.42%
Si 288.158†	840.3	0.3909	mg/L	0.00667	9.774	mg/L	0.1666	1.70%
Sn 189.927†	-11.9	-0.00216	mg/L	0.000430	-0.05408	mg/L	0.010746	19.87%
Sr 421.552†	87736.5	0.09366	mg/L	0.001709	2.342	mg/L	0.0427	1.82%
Ti 334.903†	10172.9	0.4878	mg/L	0.00996	12.20	mg/L	0.249	2.04%
Tl 190.801†	-2.5	0.00052	mg/L	0.000990	0.01292	mg/L	0.024749	191.61%
V 292.402†	2643.6	0.01959	mg/L	0.000171	0.4898	mg/L	0.00427	0.87%
Zn 206.200†	1365.8	0.3369	mg/L	0.00632	8.423	mg/L	0.1579	1.87%

Sequence No.: 20
Sample ID: VR33 A SWC

Autosampler Location: 349
Date Collected: 11/16/2012 2:48:08 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2197010.1	97.33	%	0.829				0.85%
ScR 361.383	282869.4	98.93	%	0.700				0.71%
Ag 328.068†	85.5	0.00051	mg/L	0.000082	0.00256	mg/L	0.000411	16.03%
Al 308.215†	104658.3	58.76	mg/L	0.341	293.8	mg/L	1.71	0.58%
As 188.979†	1.2	0.06589	mg/L	0.000304	0.3294	mg/L	0.00152	0.46%
B 249.677†	116.0	0.01474	mg/L	0.001416	0.07368	mg/L	0.007080	9.61%
Ba 233.527†	5504.4	1.202	mg/L	0.0109	6.008	mg/L	0.0543	0.90%
Be 313.042†	1288.3	0.00189	mg/L	0.000030	0.00944	mg/L	0.000150	1.59%
Ca 317.933†	451121.9	31.76	mg/L	0.228	158.8	mg/L	1.14	0.72%
Cd 228.802†	1140.2	0.03538	mg/L	0.000526	0.1769	mg/L	0.00263	1.49%
Co 228.616†	1253.5	0.02997	mg/L	0.000432	0.1499	mg/L	0.00216	1.44%
Cr 267.716†	529.3	0.08568	mg/L	0.000969	0.4284	mg/L	0.00484	1.13%
Cu 324.752†	31458.7	0.1235	mg/L	0.00127	0.6175	mg/L	0.00633	1.03%
Fe 273.955†	93927.4	71.64	mg/L	0.504	358.2	mg/L	2.52	0.70%
K 766.490†	14416.4	7.233	mg/L	0.0401	36.16	mg/L	0.201	0.55%
Mg 279.077†	26949.7	18.24	mg/L	0.126	91.19	mg/L	0.631	0.69%
Mn 257.610†	157696.9	4.359	mg/L	0.0313	21.80	mg/L	0.157	0.72%
Mo 202.031†	66.1	0.00295	mg/L	0.000080	0.01473	mg/L	0.000400	2.72%
Na 589.592†	8522.9	0.6689	mg/L	0.00795	3.345	mg/L	0.0398	1.19%
Na 330.237†	-9.6	-0.3406	mg/L	0.15544	-1.703	mg/L	0.7772	45.64%
Ni 231.604†	342.9	0.08320	mg/L	0.002262	0.4160	mg/L	0.01131	2.72%
Pb 220.353†	14355.2	1.805	mg/L	0.0129	9.026	mg/L	0.0645	0.71%
Sb 206.836†	31.1	0.00966	mg/L	0.001820	0.04832	mg/L	0.009102	18.84%
Se 196.026†	3.1	0.00198	mg/L	0.002668	0.00991	mg/L	0.013339	134.56%
Si 288.158†	3973.7	1.849	mg/L	0.0152	9.243	mg/L	0.0759	0.82%
Sn 189.927†	-18.3	-0.00037	mg/L	0.000723	-0.00186	mg/L	0.003617	194.70%
Sr 421.552†	424255.2	0.4529	mg/L	0.00286	2.265	mg/L	0.0143	0.63%
Ti 334.903†	48922.9	2.346	mg/L	0.0144	11.73	mg/L	0.072	0.61%
Tl 190.801†	-9.5	0.00336	mg/L	0.000219	0.01681	mg/L	0.001096	6.52%
V 292.402†	13101.0	0.09724	mg/L	0.000991	0.4862	mg/L	0.00496	1.02%
Zn 206.200†	6642.3	1.639	mg/L	0.0155	8.193	mg/L	0.0776	0.95%

Sequence No.: 21
Sample ID: VR33 ADUP SWC

Autosampler Location: 350
Date Collected: 11/16/2012 2:52:09 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2185960.0	96.84	%	1.328				1.37%
ScR 361.383	275819.5	96.46	%	2.010				2.08%
Ag 328.068†	14.1	0.00011	mg/L	0.000277	0.00054	mg/L	0.001387	255.07%
Al 308.215†	105731.2	59.36	mg/L	1.535	296.8	mg/L	7.67	2.59%
As 188.979†	-4.3	0.06320	mg/L	0.002367	0.3160	mg/L	0.01183	3.75%
B 249.677†	107.4	0.01364	mg/L	0.001102	0.06820	mg/L	0.005512	8.08%
Ba 233.527†	5397.3	1.178	mg/L	0.0244	5.890	mg/L	0.1219	2.07%
Be 313.042†	1289.0	0.00189	mg/L	0.000057	0.00945	mg/L	0.000284	3.00%
Ca 317.933†	448164.8	31.55	mg/L	0.806	157.8	mg/L	4.03	2.56%
Cd 228.802†	1082.5	0.03356	mg/L	0.000875	0.1678	mg/L	0.00437	2.61%
Co 228.616†	1205.7	0.02860	mg/L	0.001079	0.1430	mg/L	0.00540	3.77%
Cr 267.716†	512.2	0.08293	mg/L	0.001163	0.4146	mg/L	0.00582	1.40%
Cu 324.752†	30149.6	0.1185	mg/L	0.00244	0.5924	mg/L	0.01221	2.06%
Fe 273.955†	94574.0	72.13	mg/L	1.962	360.7	mg/L	9.81	2.72%
K 766.490†	13944.7	6.996	mg/L	0.2026	34.98	mg/L	1.013	2.90%
Mg 279.077†	27538.0	18.64	mg/L	0.491	93.18	mg/L	2.453	2.63%
Mn 257.610†	155747.2	4.305	mg/L	0.1145	21.53	mg/L	0.572	2.66%
Mo 202.031†	74.0	0.00334	mg/L	0.000157	0.01671	mg/L	0.000787	4.71%
Na 589.592†	8480.0	0.6656	mg/L	0.01996	3.328	mg/L	0.0998	3.00%
Na 330.237†	-7.5	-0.2539	mg/L	0.18269	-1.270	mg/L	0.9134	71.95%
Ni 231.604†	302.7	0.07346	mg/L	0.001435	0.3673	mg/L	0.00718	1.95%
Pb 220.353†	13523.3	1.701	mg/L	0.0349	8.507	mg/L	0.1745	2.05%
Sb 206.836†	28.3	0.00883	mg/L	0.002305	0.04416	mg/L	0.011524	26.09%
Se 196.026†	3.3	0.00217	mg/L	0.001722	0.01085	mg/L	0.008609	79.33%
Si 288.158†	2595.8	1.208	mg/L	0.0199	6.042	mg/L	0.0996	1.65%
Sn 189.927†	-19.9	-0.00081	mg/L	0.000521	-0.00403	mg/L	0.002606	64.60%
Sr 421.552†	414542.4	0.4425	mg/L	0.01142	2.213	mg/L	0.0571	2.58%
Ti 334.903†	49069.0	2.353	mg/L	0.0609	11.76	mg/L	0.305	2.59%
Tl 190.801†	-5.8	0.00489	mg/L	0.002419	0.02443	mg/L	0.012096	49.51%
V 292.402†	13204.4	0.09799	mg/L	0.001836	0.4900	mg/L	0.00918	1.87%
Zn 206.200†	6512.1	1.606	mg/L	0.0284	8.032	mg/L	0.1421	1.77%

Sequence No.: 22
Sample ID: VR33 ASPK SWC

Autosampler Location: 351
Date Collected: 11/16/2012 2:56:10 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2142405.4	94.91	%	1.753				1.85%
ScR 361.383	280968.0	98.26	%	0.452				0.46%
Ag 328.068†	36884.2	0.2088	mg/L	0.00372	1.044	mg/L	0.0186	1.78%
Al 308.215†	108079.9	60.68	mg/L	0.743	303.4	mg/L	3.71	1.22%
As 188.979†	1550.2	0.8844	mg/L	0.02144	4.422	mg/L	0.1072	2.42%
B 249.677†	118.8	0.01465	mg/L	0.000571	0.07324	mg/L	0.002856	3.90%
Ba 233.527†	9251.5	2.028	mg/L	0.0112	10.14	mg/L	0.056	0.55%
Be 313.042†	135482.4	0.2036	mg/L	0.00311	1.018	mg/L	0.0156	1.53%
Ca 317.933†	515656.7	36.30	mg/L	0.530	181.5	mg/L	2.65	1.46%
Cd 228.802†	8436.5	0.2604	mg/L	0.00689	1.302	mg/L	0.0344	2.64%
Co 228.616†	8954.3	0.2484	mg/L	0.00675	1.242	mg/L	0.0338	2.72%
Cr 267.716†	1867.2	0.3004	mg/L	0.00123	1.502	mg/L	0.0061	0.41%
Cu 324.752†	88984.5	0.3447	mg/L	0.00599	1.724	mg/L	0.0300	1.74%
Fe 273.955†	94471.8	72.05	mg/L	1.051	360.3	mg/L	5.25	1.46%
K 766.490†	22041.0	11.06	mg/L	0.146	55.29	mg/L	0.729	1.32%
Mg 279.077†	36383.7	24.64	mg/L	0.165	123.2	mg/L	0.83	0.67%
Mn 257.610†	161846.9	4.474	mg/L	0.0585	22.37	mg/L	0.293	1.31%
Mo 202.031†	69.5	0.00306	mg/L	0.000186	0.01528	mg/L	0.000930	6.08%
Na 589.592†	59637.9	4.681	mg/L	0.0522	23.40	mg/L	0.261	1.11%
Na 330.237†	125.3	4.289	mg/L	0.0369	21.45	mg/L	0.184	0.86%
Ni 231.604†	1122.9	0.2721	mg/L	0.00248	1.361	mg/L	0.0124	0.91%
Pb 220.353†	20306.6	2.550	mg/L	0.0484	12.75	mg/L	0.242	1.90%
Sb 206.836†	39.5	0.00996	mg/L	0.003632	0.04979	mg/L	0.018159	36.47%
Se 196.026†	1235.7	0.8297	mg/L	0.01667	4.148	mg/L	0.0833	2.01%
Si 288.158†	5135.2	2.390	mg/L	0.0121	11.95	mg/L	0.060	0.51%
Sn 189.927†	-27.5	-0.00214	mg/L	0.001481	-0.01070	mg/L	0.007407	69.22%
Sr 421.552†	610482.4	0.6517	mg/L	0.00803	3.259	mg/L	0.0402	1.23%
Ti 334.903†	48101.4	2.306	mg/L	0.0304	11.53	mg/L	0.152	1.32%
Tl 190.801†	2021.2	0.7956	mg/L	0.02131	3.978	mg/L	0.1066	2.68%
V 292.402†	41779.2	0.3172	mg/L	0.00593	1.586	mg/L	0.0297	1.87%
Zn 206.200†	7329.2	1.808	mg/L	0.0141	9.040	mg/L	0.0707	0.78%

Sequence No.: 23
Sample ID: ~~VR33 APOST SWC~~ 222222
Dilution: 5.000000X 11-20

Autosampler Location: 352
Date Collected: 11/16/2012 3:00:12 PM
Data Type: Original

Nebulizer Parameters: VR33 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2106758.8	93.34	%	1.847				1.98%
ScR 361.383	269886.5	94.39	%	1.647				1.75%
Ag 328.068†	94641.5	0.5357	mg/L	0.01631	2.679	mg/L	0.0815	3.04%
Al 308.215†	113885.5	63.94	mg/L	0.899	319.7	mg/L	4.49	1.41%
As 188.979†	4047.3	2.210	mg/L	0.0401	11.05	mg/L	0.201	1.81%
B 249.677†	139.2	0.01654	mg/L	0.002373	0.08269	mg/L	0.011866	14.35%
Ba 233.527†	15750.8	3.459	mg/L	0.0777	17.30	mg/L	0.388	2.25%
Be 313.042†	352511.0	0.5299	mg/L	0.00713	2.650	mg/L	0.0356	1.35%
Ca 317.933†	624108.6	43.94	mg/L	0.547	219.7	mg/L	2.73	1.24%
Cd 228.802†	20194.9	0.6230	mg/L	0.01324	3.115	mg/L	0.0662	2.12%
Co 228.616†	21137.7	0.5934	mg/L	0.01236	2.967	mg/L	0.0618	2.08%
Cr 267.716†	3988.6	0.6414	mg/L	0.01385	3.207	mg/L	0.0693	2.16%
Cu 324.752†	179961.7	0.6948	mg/L	0.02143	3.474	mg/L	0.1071	3.08%
Fe 273.955†	101000.5	77.03	mg/L	1.003	385.1	mg/L	5.01	1.30%
K 766.490†	36995.4	18.56	mg/L	0.238	92.81	mg/L	1.192	1.28%
Mg 279.077†	45990.2	31.15	mg/L	0.670	155.7	mg/L	3.35	2.15%
Mn 257.610†	184132.4	5.090	mg/L	0.0628	25.45	mg/L	0.314	1.23%
Mo 202.031†	89.0	0.00392	mg/L	0.000008	0.01962	mg/L	0.000039	0.20%
Na 589.592†	142277.3	11.17	mg/L	0.154	55.83	mg/L	0.771	1.38%
Na 330.237†	312.8	10.72	mg/L	0.349	53.61	mg/L	1.747	3.26%
Ni 231.604†	2490.2	0.6033	mg/L	0.01317	3.017	mg/L	0.0659	2.18%
Pb 220.353†	32344.9	4.055	mg/L	0.0845	20.27	mg/L	0.422	2.08%
Sb 206.836†	52.6	0.01040	mg/L	0.002690	0.05198	mg/L	0.013452	25.88%
Se 196.026†	3222.2	2.164	mg/L	0.0432	10.82	mg/L	0.216	2.00%
Si 288.158†	4106.6	1.914	mg/L	0.0473	9.570	mg/L	0.2366	2.47%
Sn 189.927†	-31.1	-0.00206	mg/L	0.000930	-0.01028	mg/L	0.004652	45.26%
Sr 421.552†	940232.6	1.004	mg/L	0.0138	5.019	mg/L	0.0692	1.38%
Ti 334.903†	51401.9	2.464	mg/L	0.0319	12.32	mg/L	0.160	1.30%
Tl 190.801†	5259.7	2.060	mg/L	0.0429	10.30	mg/L	0.214	2.08%
V 292.402†	84340.0	0.6435	mg/L	0.01957	3.217	mg/L	0.0978	3.04%
Zn 206.200†	8928.5	2.203	mg/L	0.0469	11.01	mg/L	0.234	2.13%

Sequence No.: 24
Sample ID: VR33 MB1SPK SWC

Autosampler Location: 353
Date Collected: 11/16/2012 3:03:16 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR33 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2171374.1	96.20	%	2.033				2.11%
ScR 361.383	274831.1	96.12	%	2.171				2.26%
Ag 328.068†	96457.9	0.5460	mg/L	0.00737	1.092	mg/L	0.0147	1.35%
Al 308.215†	3870.9	2.166	mg/L	0.0405	4.331	mg/L	0.0810	1.87%
As 188.979†	3971.9	2.102	mg/L	0.0437	4.204	mg/L	0.0875	2.08%
B 249.677†	6.4	-0.00031	mg/L	0.000077	-0.00062	mg/L	0.000153	24.77%
Ba 233.527†	9879.0	2.177	mg/L	0.0394	4.355	mg/L	0.0788	1.81%
Be 313.042†	345105.1	0.5188	mg/L	0.01265	1.038	mg/L	0.0253	2.44%
Ca 317.933†	147987.5	10.42	mg/L	0.251	20.84	mg/L	0.502	2.41%
Cd 228.802†	18322.4	0.5648	mg/L	0.00789	1.130	mg/L	0.0158	1.40%
Co 228.616†	19366.7	0.5490	mg/L	0.00772	1.098	mg/L	0.0154	1.41%
Cr 267.716†	3419.2	0.5493	mg/L	0.01036	1.099	mg/L	0.0207	1.89%
Cu 324.752†	138504.2	0.5327	mg/L	0.01286	1.065	mg/L	0.0257	2.41%
Fe 273.955†	2916.5	2.221	mg/L	0.0481	4.441	mg/L	0.0962	2.17%
K 766.490†	20975.3	10.52	mg/L	0.317	21.05	mg/L	0.633	3.01%
Mg 279.077†	16091.8	10.91	mg/L	0.212	21.83	mg/L	0.424	1.94%
Mn 257.610†	19923.2	0.5511	mg/L	0.01087	1.102	mg/L	0.0217	1.97%
Mo 202.031†	23.2	0.00101	mg/L	0.000208	0.00203	mg/L	0.000416	20.50%
Na 589.592†	129121.7	10.13	mg/L	0.258	20.27	mg/L	0.517	2.55%
Na 330.237†	300.6	10.29	mg/L	0.211	20.58	mg/L	0.422	2.05%
Ni 231.604†	2286.1	0.5538	mg/L	0.00961	1.108	mg/L	0.0192	1.74%
Pb 220.353†	16752.9	2.095	mg/L	0.0331	4.189	mg/L	0.0661	1.58%
Sb 206.836†	23.8	0.00148	mg/L	0.000629	0.00297	mg/L	0.001258	42.37%
Se 196.026†	3130.4	2.102	mg/L	0.0437	4.204	mg/L	0.0875	2.08%
Si 288.158†	2.4	0.00453	mg/L	0.002821	0.00906	mg/L	0.005643	62.25%
Sn 189.927†	-23.8	-0.00473	mg/L	0.000530	-0.00947	mg/L	0.001060	11.19%
Sr 421.552†	480735.9	0.5132	mg/L	0.01334	1.026	mg/L	0.0267	2.60%
Ti 334.903†	44.9	0.00155	mg/L	0.000232	0.00309	mg/L	0.000464	14.99%
Tl 190.801†	5273.4	2.058	mg/L	0.0412	4.115	mg/L	0.0825	2.00%
V 292.402†	71334.2	0.5471	mg/L	0.00729	1.094	mg/L	0.0146	1.33%
Zn 206.200†	2103.8	0.5190	mg/L	0.00928	1.038	mg/L	0.0186	1.79%

Sequence No.: 25
Sample ID: CV 10

Autosampler Location: 7
Date Collected: 11/16/2012 3:07:17 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2055025.7	91.04	%	2.792				3.07%
ScR 361.383	261665.3	91.51	%	1.381				1.51%
Ag 328.068†	191730.1	1.085	mg/L	0.0335	1.085	mg/L	0.0335	3.08%
Al 308.215†	4066.5	2.245	mg/L	0.0445	2.245	mg/L	0.0445	1.98%
As 188.979†	4099.2	2.197	mg/L	0.0743	2.197	mg/L	0.0743	3.38%
B 249.677†	8397.5	1.071	mg/L	0.0194	1.071	mg/L	0.0194	1.81%
Ba 233.527†	5130.9	1.131	mg/L	0.0189	1.131	mg/L	0.0189	1.67%
Be 313.042†	704411.6	1.059	mg/L	0.0245	1.059	mg/L	0.0245	2.32%
Ca 317.933†	30605.7	2.155	mg/L	0.0465	2.155	mg/L	0.0465	2.16%
Cd 228.802†	37055.5	1.156	mg/L	0.0353	1.156	mg/L	0.0353	3.06%
Co 228.616†	39931.6	1.130	mg/L	0.0342	1.130	mg/L	0.0342	3.02%
Cr 267.716†	7111.9	1.144	mg/L	0.0196	1.144	mg/L	0.0196	1.72%
Cu 324.752†	292706.7	1.125	mg/L	0.0346	1.125	mg/L	0.0346	3.08%
Fe 273.955†	3045.8	2.315	mg/L	0.0393	2.315	mg/L	0.0393	1.70%
K 766.490†	44016.9	22.08	mg/L	0.500	22.08	mg/L	0.500	2.26%
Mg 279.077†	3321.3	2.260	mg/L	0.0384	2.260	mg/L	0.0384	1.70%
Mn 257.610†	40215.4	1.112	mg/L	0.0259	1.112	mg/L	0.0259	2.33%
Mo 202.031†	23113.1	1.152	mg/L	0.0381	1.152	mg/L	0.0381	3.31%
Na 589.592†	689160.7	54.09	mg/L	1.309	54.09	mg/L	1.309	2.42%
Na 330.237†	1648.0	57.24	mg/L	1.033	57.24	mg/L	1.033	1.80%
Ni 231.604†	4433.3	1.076	mg/L	0.0174	1.076	mg/L	0.0174	1.62%
Pb 220.353†	17944.9	2.244	mg/L	0.0750	2.244	mg/L	0.0750	3.34%
Sb 206.836†	7743.5	2.367	mg/L	0.0820	2.367	mg/L	0.0820	3.46%
Se 196.026†	3230.3	2.168	mg/L	0.0718	2.168	mg/L	0.0718	3.31%
Si 288.158†	4989.8	2.318	mg/L	0.0510	2.318	mg/L	0.0510	2.20%
Sn 189.927†	4430.3	1.138	mg/L	0.0388	1.138	mg/L	0.0388	3.41%
Sr 421.552†	991814.1	1.059	mg/L	0.0241	1.059	mg/L	0.0241	2.28%
Ti 334.903†	23528.3	1.128	mg/L	0.0253	1.128	mg/L	0.0253	2.25%
Tl 190.801†	5552.4	2.163	mg/L	0.0759	2.163	mg/L	0.0759	3.51%
V 292.402†	146501.5	1.124	mg/L	0.0343	1.124	mg/L	0.0343	3.05%
Zn 206.200†	4501.3	1.110	mg/L	0.0188	1.110	mg/L	0.0188	1.70%

Sequence No.: 26
Sample ID: CB 10
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 3:12:09 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2175282.2	96.37	%	0.499				0.52%
ScR 361.383	269291.1	94.18	%	1.388				1.47%
Ag 328.068†	42.6	0.00024	mg/L	0.000194	0.00024	mg/L	0.000194	80.56%
Al 308.215†	61.2	0.03435	mg/L	0.015204	0.03435	mg/L	0.015204	44.26%
As 188.979†	-1.4	-0.00071	mg/L	0.001499	-0.00071	mg/L	0.001499	211.70%
B 249.677†	8.0	0.00102	mg/L	0.000142	0.00102	mg/L	0.000142	13.91%
Ba 233.527†	0.2	0.00004	mg/L	0.000226	0.00004	mg/L	0.000226	641.23%
Be 313.042†	256.6	0.00039	mg/L	0.000075	0.00039	mg/L	0.000075	19.46%
Ca 317.933†	99.2	0.00699	mg/L	0.001601	0.00699	mg/L	0.001601	22.92%
Cd 228.802†	-3.5	-0.00010	mg/L	0.000127	-0.00010	mg/L	0.000127	122.33%
Co 228.616†	-8.3	-0.00024	mg/L	0.000094	-0.00024	mg/L	0.000094	39.63%
Cr 267.716†	-16.2	-0.00261	mg/L	0.000392	-0.00261	mg/L	0.000392	15.01%
Cu 324.752†	49.4	0.00019	mg/L	0.000143	0.00019	mg/L	0.000143	75.32%
Fe 273.955†	18.6	0.01422	mg/L	0.002404	0.01422	mg/L	0.002404	16.91%
K 766.490†	50.7	0.02545	mg/L	0.018499	0.02545	mg/L	0.018499	72.69%
Mg 279.077†	16.9	0.01148	mg/L	0.005517	0.01148	mg/L	0.005517	48.04%
Mn 257.610†	32.3	0.00089	mg/L	0.000095	0.00089	mg/L	0.000095	10.62%
Mo 202.031†	13.8	0.00069	mg/L	0.000200	0.00069	mg/L	0.000200	29.05%
Na 589.592†	110.9	0.00870	mg/L	0.002901	0.00870	mg/L	0.002901	33.33%
Na 330.237†	-35.9	-1.249	mg/L	0.5677	-1.249	mg/L	0.5677	45.45%
Ni 231.604†	3.4	0.00083	mg/L	0.001081	0.00083	mg/L	0.001081	130.05%
Pb 220.353†	11.3	0.00142	mg/L	0.000222	0.00142	mg/L	0.000222	15.62%
Sb 206.836†	13.9	0.00427	mg/L	0.001452	0.00427	mg/L	0.001452	34.01%
Se 196.026†	4.2	0.00282	mg/L	0.003440	0.00282	mg/L	0.003440	122.00%
Si 288.158†	6.3	0.00291	mg/L	0.001165	0.00291	mg/L	0.001165	39.98%
Sn 189.927†	-2.6	-0.00066	mg/L	0.000734	-0.00066	mg/L	0.000734	110.79%
Sr 421.552†	296.3	0.00032	mg/L	0.000076	0.00032	mg/L	0.000076	24.10%
Ti 334.903†	18.4	0.00088	mg/L	0.000893	0.00088	mg/L	0.000893	100.98%
Tl 190.801†	2.4	0.00094	mg/L	0.001042	0.00094	mg/L	0.001042	111.11%
V 292.402†	-9.9	-0.00009	mg/L	0.000113	-0.00009	mg/L	0.000113	129.39%
Zn 206.200†	1.5	0.00036	mg/L	0.000684	0.00036	mg/L	0.000684	189.09%

User canceled analysis.

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Analysis Begun

Start Time: 11/16/2012 3:17:17 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: CV 11
Autosampler Location: 7
Date Collected: 11/16/2012 3:17:19 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2205026.8	97.69	%	0.284				0.29%
ScR 361.383	272599.1	95.34	%	1.404				1.47%
Ag 328.068†	176087.0	0.9967	mg/L	0.00337	0.9967	mg/L	0.00337	0.34%
Al 308.215†	3808.9	2.103	mg/L	0.0311	2.103	mg/L	0.0311	1.48%
As 188.979†	3802.1	2.040	mg/L	0.0104	2.040	mg/L	0.0104	0.51%
B 249.677†	7846.6	1.000	mg/L	0.0077	1.000	mg/L	0.0077	0.77%
Ba 233.527†	4799.5	1.057	mg/L	0.0099	1.057	mg/L	0.0099	0.93%
Be 313.042†	675105.6	1.015	mg/L	0.0226	1.015	mg/L	0.0226	2.23%
Ca 317.933†	30281.1	2.132	mg/L	0.0182	2.132	mg/L	0.0182	0.85%
Cd 228.802†	34067.4	1.063	mg/L	0.0036	1.063	mg/L	0.0036	0.34%
Co 228.616†	36804.5	1.042	mg/L	0.0037	1.042	mg/L	0.0037	0.35%
Cr 267.716†	6627.2	1.066	mg/L	0.0064	1.066	mg/L	0.0064	0.60%
Cu 324.752†	268747.6	1.033	mg/L	0.0036	1.033	mg/L	0.0036	0.35%
Fe 273.955†	2839.6	2.159	mg/L	0.0239	2.159	mg/L	0.0239	1.11%
K 766.490†	42213.9	21.18	mg/L	0.438	21.18	mg/L	0.438	2.07%
Mg 279.077†	3080.5	2.096	mg/L	0.0277	2.096	mg/L	0.0277	1.32%
Mn 257.610†	39317.4	1.087	mg/L	0.0127	1.087	mg/L	0.0127	1.17%
Mo 202.031†	21334.1	1.063	mg/L	0.0072	1.063	mg/L	0.0072	0.68%
Na 589.592†	661887.1	51.95	mg/L	1.089	51.95	mg/L	1.089	2.10%
Na 330.237†	1538.3	53.44	mg/L	0.370	53.44	mg/L	0.370	0.69%
Ni 231.604†	4172.5	1.013	mg/L	0.0079	1.013	mg/L	0.0079	0.78%
Pb 220.353†	16580.1	2.073	mg/L	0.0125	2.073	mg/L	0.0125	0.60%
Sb 206.836†	7154.3	2.187	mg/L	0.0134	2.187	mg/L	0.0134	0.61%
Se 196.026†	2995.3	2.011	mg/L	0.0045	2.011	mg/L	0.0045	0.22%
Si 288.158†	4679.7	2.174	mg/L	0.0196	2.174	mg/L	0.0196	0.90%
Sn 189.927†	4095.3	1.052	mg/L	0.0056	1.052	mg/L	0.0056	0.53%
Sr 421.552†	951999.3	1.016	mg/L	0.0225	1.016	mg/L	0.0225	2.21%
Ti 334.903†	23080.8	1.106	mg/L	0.0116	1.106	mg/L	0.0116	1.04%
Tl 190.801†	5143.2	2.003	mg/L	0.0138	2.003	mg/L	0.0138	0.69%
V 292.402†	134695.1	1.033	mg/L	0.0027	1.033	mg/L	0.0027	0.26%
Zn 206.200†	4209.8	1.038	mg/L	0.0114	1.038	mg/L	0.0114	1.10%

Sequence No.: 2
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/16/2012 3:21:25 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2205990.5	97.73	%	0.524				0.54%
ScR 361.383	282658.6	98.86	%	0.999				1.01%
Ag 328.068†	80.4	0.00046	mg/L	0.000091	0.00046	mg/L	0.000091	19.98%
Al 308.215†	32.9	0.01847	mg/L	0.003273	0.01847	mg/L	0.003273	17.72%
As 188.979†	-0.2	-0.00006	mg/L	0.002036	-0.00006	mg/L	0.002036	>999.9%
B 249.677†	10.2	0.00130	mg/L	0.001198	0.00130	mg/L	0.001198	92.13%
Ba 233.527†	0.2	0.00004	mg/L	0.000486	0.00004	mg/L	0.000486	>999.9%
Be 313.042†	246.5	0.00037	mg/L	0.000039	0.00037	mg/L	0.000039	10.47%
Ca 317.933†	88.0	0.00619	mg/L	0.000185	0.00619	mg/L	0.000185	2.98%
Cd 228.802†	-4.3	-0.00014	mg/L	0.000052	-0.00014	mg/L	0.000052	37.80%
Co 228.616†	-7.8	-0.00022	mg/L	0.000129	-0.00022	mg/L	0.000129	57.82%
Cr 267.716†	-6.5	-0.00105	mg/L	0.000598	-0.00105	mg/L	0.000598	56.73%
Cu 324.752†	92.6	0.00036	mg/L	0.000061	0.00036	mg/L	0.000061	17.27%
Fe 273.955†	16.2	0.01239	mg/L	0.001815	0.01239	mg/L	0.001815	14.65%
K 766.490†	-12.4	-0.00621	mg/L	0.019972	-0.00621	mg/L	0.019972	321.49%
Mg 279.077†	11.7	0.00792	mg/L	0.002414	0.00792	mg/L	0.002414	30.47%
Mn 257.610†	19.7	0.00054	mg/L	0.000171	0.00054	mg/L	0.000171	31.49%
Mo 202.031†	16.6	0.00083	mg/L	0.000292	0.00083	mg/L	0.000292	35.21%
Na 589.592†	123.6	0.00970	mg/L	0.002894	0.00970	mg/L	0.002894	29.82%
Na 330.237†	-11.2	-0.3904	mg/L	0.11278	-0.3904	mg/L	0.11278	28.89%
Ni 231.604†	-5.2	-0.00126	mg/L	0.000973	-0.00126	mg/L	0.000973	77.51%
Pb 220.353†	10.3	0.00129	mg/L	0.000551	0.00129	mg/L	0.000551	42.74%
Sb 206.836†	7.7	0.00236	mg/L	0.002133	0.00236	mg/L	0.002133	90.21%
Se 196.026†	5.2	0.00352	mg/L	0.002450	0.00352	mg/L	0.002450	69.67%
Si 288.158†	4.9	0.00229	mg/L	0.002917	0.00229	mg/L	0.002917	127.24%
Sn 189.927†	-2.9	-0.00073	mg/L	0.001055	-0.00073	mg/L	0.001055	144.00%
Sr 421.552†	331.2	0.00035	mg/L	0.000007	0.00035	mg/L	0.000007	2.12%
Ti 334.903†	25.9	0.00124	mg/L	0.000343	0.00124	mg/L	0.000343	27.62%
Tl 190.801†	7.0	0.00274	mg/L	0.002116	0.00274	mg/L	0.002116	77.25%
V 292.402†	-1.8	-0.00002	mg/L	0.000081	-0.00002	mg/L	0.000081	427.06%
Zn 206.200†	-1.7	-0.00041	mg/L	0.000299	-0.00041	mg/L	0.000299	72.41%

User canceled analysis.

Analysis Begun

Start Time: 11/16/2012 3:27:02 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VR33 E SWC
Autosampler Location: 354
Date Collected: 11/16/2012 3:27:03 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2192953.1	97.15	%	0.867				0.89%
ScR 361.383	285480.3	99.84	%	1.018				1.02%
Ag 328.068†	-67.9	-0.00034	mg/L	0.000223	-0.00171	mg/L	0.001115	65.30%
Al 308.215†	116911.9	65.64	mg/L	0.609	328.2	mg/L	3.04	0.93%
As 188.979†	31.7	0.08177	mg/L	0.001483	0.4089	mg/L	0.00742	1.81%
B 249.677†	52.7	0.00661	mg/L	0.000896	0.03304	mg/L	0.004482	13.57%
Ba 233.527†	5816.7	1.264	mg/L	0.0172	6.322	mg/L	0.0858	1.36%
Be 313.042†	1667.7	0.00245	mg/L	0.000041	0.01225	mg/L	0.000203	1.66%
Ca 317.933†	327589.0	23.06	mg/L	0.264	115.3	mg/L	1.32	1.15%
Cd 228.802†	985.6	0.03005	mg/L	0.000648	0.1503	mg/L	0.00324	2.16%
Co 228.616†	2027.7	0.05150	mg/L	0.000671	0.2575	mg/L	0.00335	1.30%
Cr 267.716†	895.9	0.1457	mg/L	0.00143	0.7287	mg/L	0.00714	0.98%
Cu 324.752†	32206.7	0.1280	mg/L	0.00078	0.6398	mg/L	0.00391	0.61%
Fe 273.955†	141674.9	108.1	mg/L	1.20	540.3	mg/L	6.00	1.11%
K 766.490†	24541.9	12.31	mg/L	0.089	61.56	mg/L	0.446	0.72%
Mg 279.077†	35208.8	23.82	mg/L	0.284	119.1	mg/L	1.42	1.19%
Mn 257.610†	153157.4	4.234	mg/L	0.0416	21.17	mg/L	0.208	0.98%
Mo 202.031†	70.9	0.00328	mg/L	0.000128	0.01638	mg/L	0.000641	3.91%
Na 589.592†	5658.8	0.4441	mg/L	0.00545	2.221	mg/L	0.0272	1.23%
Na 330.237†	-8.3	-0.1790	mg/L	0.08433	-0.8950	mg/L	0.42166	47.11%
Ni 231.604†	401.8	0.09751	mg/L	0.000756	0.4876	mg/L	0.00378	0.78%
Pb 220.353†	8709.3	1.100	mg/L	0.0115	5.499	mg/L	0.0574	1.04%
Sb 206.836†	32.7	0.00945	mg/L	0.001535	0.04727	mg/L	0.007673	16.23%
Se 196.026†	8.4	0.00552	mg/L	0.001830	0.02759	mg/L	0.009151	33.17%
Si 288.158†	2633.1	1.226	mg/L	0.0091	6.132	mg/L	0.0457	0.74%
Sn 189.927†	-31.7	-0.00492	mg/L	0.001017	-0.02458	mg/L	0.005083	20.68%
Sr 421.552†	204028.1	0.2178	mg/L	0.00178	1.089	mg/L	0.0089	0.82%
Ti 334.903†	48407.2	2.322	mg/L	0.0244	11.61	mg/L	0.122	1.05%
Tl 190.801†	-24.0	0.00129	mg/L	0.003075	0.00644	mg/L	0.015377	238.78%
V 292.402†	19516.2	0.1452	mg/L	0.00063	0.7260	mg/L	0.00316	0.44%
Zn 206.200†	5140.3	1.268	mg/L	0.0154	6.340	mg/L	0.0772	1.22%

Sequence No.: 2
Sample ID: VR33 F SWC

Autosampler Location: 355
Date Collected: 11/16/2012 3:31:05 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2162550.8	95.81	%	0.881				0.92%
ScR 361.383	280731.6	98.18	%	2.130				2.17%
Ag 328.068†	-304.8	-0.00168	mg/L	0.000052	-0.00841	mg/L	0.000258	3.07%
Al 308.215†	123974.1	69.61	mg/L	1.960	348.0	mg/L	9.80	2.82%
As 188.979†	-33.5	0.05652	mg/L	0.003227	0.2826	mg/L	0.01614	5.71%
B 249.677†	56.8	0.00713	mg/L	0.000964	0.03564	mg/L	0.004821	13.53%
Ba 233.527†	5706.2	1.240	mg/L	0.0236	6.200	mg/L	0.1178	1.90%
Be 313.042†	1614.7	0.00237	mg/L	0.000076	0.01183	mg/L	0.000382	3.23%
Ca 317.933†	276299.3	19.45	mg/L	0.573	97.26	mg/L	2.867	2.95%
Cd 228.802†	345.8	0.01007	mg/L	0.000367	0.05037	mg/L	0.001837	3.65%
Co 228.616†	2051.8	0.05155	mg/L	0.000705	0.2578	mg/L	0.00353	1.37%
Cr 267.716†	862.5	0.1406	mg/L	0.00261	0.7028	mg/L	0.01307	1.86%
Cu 324.752†	30082.0	0.1198	mg/L	0.00121	0.5989	mg/L	0.00605	1.01%
Fe 273.955†	143362.5	109.3	mg/L	2.73	546.7	mg/L	13.63	2.49%
K 766.490†	23335.8	11.71	mg/L	0.340	58.54	mg/L	1.698	2.90%
Mg 279.077†	34307.1	23.21	mg/L	0.677	116.0	mg/L	3.39	2.92%
Mn 257.610†	142265.7	3.933	mg/L	0.1003	19.66	mg/L	0.501	2.55%
Mo 202.031†	63.9	0.00296	mg/L	0.000251	0.01482	mg/L	0.001253	8.45%
Na 589.592†	7038.2	0.5524	mg/L	0.01984	2.762	mg/L	0.0992	3.59%
Na 330.237†	-18.8	-0.2617	mg/L	0.08952	-1.309	mg/L	0.4476	34.20%
Ni 231.604†	409.4	0.09934	mg/L	0.002616	0.4967	mg/L	0.01308	2.63%
Pb 220.353†	3619.7	0.4646	mg/L	0.00437	2.323	mg/L	0.0219	0.94%
Sb 206.836†	26.3	0.00772	mg/L	0.002889	0.03861	mg/L	0.014447	37.42%
Se 196.026†	7.3	0.00477	mg/L	0.004039	0.02384	mg/L	0.020194	84.69%
Si 288.158†	2356.0	1.098	mg/L	0.0263	5.488	mg/L	0.1314	2.39%
Sn 189.927†	-26.6	-0.00402	mg/L	0.001034	-0.02009	mg/L	0.005171	25.73%
Sr 421.552†	179489.5	0.1916	mg/L	0.00530	0.9580	mg/L	0.02652	2.77%
Ti 334.903†	55019.3	2.639	mg/L	0.0728	13.19	mg/L	0.364	2.76%
Tl 190.801†	-27.0	0.00025	mg/L	0.000664	0.00124	mg/L	0.003322	267.21%
V 292.402†	19913.7	0.1479	mg/L	0.00180	0.7397	mg/L	0.00901	1.22%
Zn 206.200†	2579.9	0.6364	mg/L	0.01275	3.182	mg/L	0.0637	2.00%

Sequence No.: 3
Sample ID: VR33 G SWC

Autosampler Location: 356
Date Collected: 11/16/2012 3:35:06 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2149000.4	95.21	%	2.096				2.20%
ScR 361.383	277546.2	97.07	%	1.176				1.21%
Ag 328.068†	-368.3	-0.00203	mg/L	0.000277	-0.01015	mg/L	0.001387	13.67%
Al 308.215†	157873.8	88.64	mg/L	1.322	443.2	mg/L	6.61	1.49%
As 188.979†	-164.0	0.02536	mg/L	0.002497	0.1268	mg/L	0.01248	9.84%
B 249.677†	37.5	0.00467	mg/L	0.000465	0.02335	mg/L	0.002325	9.96%
Ba 233.527†	3839.6	0.8283	mg/L	0.01485	4.142	mg/L	0.0743	1.79%
Be 313.042†	1728.2	0.00251	mg/L	0.000075	0.01257	mg/L	0.000377	3.00%
Ca 317.933†	191883.2	13.51	mg/L	0.196	67.55	mg/L	0.982	1.45%
Cd 228.802†	39.2	0.00084	mg/L	0.000140	0.00421	mg/L	0.000699	16.61%
Co 228.616†	2060.9	0.04930	mg/L	0.001090	0.2465	mg/L	0.00545	2.21%
Cr 267.716†	884.3	0.1442	mg/L	0.00157	0.7209	mg/L	0.00785	1.09%
Cu 324.752†	25479.5	0.1018	mg/L	0.00237	0.5092	mg/L	0.01184	2.33%
Fe 273.955†	144334.2	110.1	mg/L	1.71	550.4	mg/L	8.53	1.55%
K 766.490†	20327.2	10.20	mg/L	0.091	50.99	mg/L	0.453	0.89%
Mg 279.077†	36122.6	24.44	mg/L	0.329	122.2	mg/L	1.65	1.35%
Mn 257.610†	88408.9	2.444	mg/L	0.0401	12.22	mg/L	0.200	1.64%
Mo 202.031†	44.4	0.00206	mg/L	0.000144	0.01030	mg/L	0.000722	7.01%
Na 589.592†	8363.1	0.6564	mg/L	0.01040	3.282	mg/L	0.0520	1.58%
Na 330.237†	-36.4	-0.4513	mg/L	0.23420	-2.257	mg/L	1.1710	51.89%
Ni 231.604†	397.5	0.09647	mg/L	0.000704	0.4823	mg/L	0.00352	0.73%
Pb 220.353†	379.3	0.06422	mg/L	0.001862	0.3211	mg/L	0.00931	2.90%
Sb 206.836†	18.7	0.00606	mg/L	0.001628	0.03029	mg/L	0.008142	26.88%
Se 196.026†	10.4	0.00682	mg/L	0.005257	0.03412	mg/L	0.026284	77.04%
Si 288.158†	3345.7	1.557	mg/L	0.0221	7.787	mg/L	0.1103	1.42%
Sn 189.927†	-29.1	-0.00522	mg/L	0.000608	-0.02612	mg/L	0.003038	11.63%
Sr 421.552†	118942.3	0.1270	mg/L	0.00194	0.6349	mg/L	0.00972	1.53%
Ti 334.903†	82362.8	3.951	mg/L	0.0625	19.76	mg/L	0.312	1.58%
Tl 190.801†	-29.5	-0.00079	mg/L	0.002695	-0.00397	mg/L	0.013473	339.07%
V 292.402†	24781.7	0.1841	mg/L	0.00397	0.9207	mg/L	0.01986	2.16%
Zn 206.200†	1040.2	0.2566	mg/L	0.00432	1.283	mg/L	0.0216	1.68%

Sequence No.: 4
Sample ID: VR33 H SWC

Autosampler Location: 357
Date Collected: 11/16/2012 3:39:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 H SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2160590.0	95.72	%	0.801				0.84%
ScR 361.383	274029.0	95.84	%	1.027				1.07%
Ag 328.068†	-312.3	-0.00172	mg/L	0.000135	-0.00858	mg/L	0.000675	7.87%
Al 308.215†	124374.0	69.83	mg/L	0.719	349.1	mg/L	3.59	1.03%
As 188.979†	-140.0	0.02483	mg/L	0.003095	0.1242	mg/L	0.01547	12.46%
B 249.677†	21.2	0.00262	mg/L	0.000402	0.01309	mg/L	0.002009	15.34%
Ba 233.527†	3463.2	0.7475	mg/L	0.00452	3.737	mg/L	0.0226	0.60%
Be 313.042†	1463.3	0.00212	mg/L	0.000031	0.01061	mg/L	0.000155	1.46%
Ca 317.933†	204587.4	14.40	mg/L	0.118	72.02	mg/L	0.591	0.82%
Cd 228.802†	36.0	0.00079	mg/L	0.000134	0.00394	mg/L	0.000669	16.98%
Co 228.616†	1714.7	0.04054	mg/L	0.000671	0.2027	mg/L	0.00335	1.65%
Cr 267.716†	1006.7	0.1636	mg/L	0.00129	0.8179	mg/L	0.00645	0.79%
Cu 324.752†	21326.1	0.08540	mg/L	0.001115	0.4270	mg/L	0.00557	1.31%
Fe 273.955†	127419.5	97.18	mg/L	1.193	485.9	mg/L	5.97	1.23%
K 766.490†	18651.1	9.358	mg/L	0.0903	46.79	mg/L	0.451	0.96%
Mg 279.077†	33540.3	22.69	mg/L	0.178	113.5	mg/L	0.89	0.78%
Mn 257.610†	64351.1	1.779	mg/L	0.0210	8.895	mg/L	0.1049	1.18%
Mo 202.031†	116.0	0.00562	mg/L	0.000212	0.02809	mg/L	0.001058	3.77%
Na 589.592†	8126.6	0.6378	mg/L	0.00757	3.189	mg/L	0.0379	1.19%
Na 330.237†	-32.3	-0.3907	mg/L	0.08328	-1.954	mg/L	0.4164	21.31%
Ni 231.604†	426.0	0.1034	mg/L	0.00102	0.5169	mg/L	0.00509	0.98%
Pb 220.353†	306.7	0.05122	mg/L	0.001091	0.2561	mg/L	0.00545	2.13%
Sb 206.836†	16.1	0.00473	mg/L	0.002050	0.02365	mg/L	0.010251	43.35%
Se 196.026†	6.1	0.00398	mg/L	0.001601	0.01989	mg/L	0.008005	40.25%
Si 288.158†	2868.7	1.336	mg/L	0.0132	6.678	mg/L	0.0659	0.99%
Sn 189.927†	-31.7	-0.00584	mg/L	0.000557	-0.02922	mg/L	0.002784	9.53%
Sr 421.552†	120004.4	0.1281	mg/L	0.00127	0.6405	mg/L	0.00635	0.99%
Ti 334.903†	72800.9	3.492	mg/L	0.0340	17.46	mg/L	0.170	0.97%
Tl 190.801†	-22.0	0.00084	mg/L	0.002591	0.00422	mg/L	0.012957	307.34%
V 292.402†	23274.8	0.1733	mg/L	0.00207	0.8666	mg/L	0.01033	1.19%
Zn 206.200†	775.6	0.1913	mg/L	0.00094	0.9566	mg/L	0.00472	0.49%

Sequence No.: 5
Sample ID: VR33 I SWC

Autosampler Location: 358
Date Collected: 11/16/2012 3:43:08 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2144634.0	95.01	%	0.784				0.83%
ScR 361.383	276532.6	96.71	%	3.570				3.69%
Ag 328.068†	-173.5	-0.00093	mg/L	0.000219	-0.00466	mg/L	0.001097	23.52%
Al 308.215†	104236.3	58.52	mg/L	2.171	292.6	mg/L	10.85	3.71%
As 188.979†	-84.5	0.04252	mg/L	0.005135	0.2126	mg/L	0.02567	12.07%
B 249.677†	116.7	0.01480	mg/L	0.000920	0.07401	mg/L	0.004598	6.21%
Ba 233.527†	3104.4	0.6700	mg/L	0.02386	3.350	mg/L	0.1193	3.56%
Be 313.042†	1459.0	0.00212	mg/L	0.000130	0.01061	mg/L	0.000648	6.11%
Ca 317.933†	422815.7	29.77	mg/L	1.074	148.8	mg/L	5.37	3.61%
Cd 228.802†	490.5	0.01500	mg/L	0.000379	0.07499	mg/L	0.001893	2.52%
Co 228.616†	1543.9	0.03657	mg/L	0.000480	0.1829	mg/L	0.00240	1.31%
Cr 267.716†	651.4	0.1059	mg/L	0.00307	0.5293	mg/L	0.01535	2.90%
Cu 324.752†	24014.2	0.09538	mg/L	0.000581	0.4769	mg/L	0.00291	0.61%
Fe 273.955†	114185.6	87.09	mg/L	3.042	435.4	mg/L	15.21	3.49%
K 766.490†	27936.0	14.02	mg/L	0.571	70.08	mg/L	2.855	4.07%
Mg 279.077†	32017.0	21.67	mg/L	0.807	108.3	mg/L	4.04	3.73%
Mn 257.610†	82839.9	2.290	mg/L	0.0787	11.45	mg/L	0.393	3.44%
Mo 202.031†	63.3	0.00283	mg/L	0.000333	0.01414	mg/L	0.001666	11.79%
Na 589.592†	8089.0	0.6349	mg/L	0.02137	3.174	mg/L	0.1068	3.37%
Na 330.237†	-19.1	-0.2087	mg/L	0.11961	-1.043	mg/L	0.5981	57.33%
Ni 231.604†	266.8	0.06473	mg/L	0.000922	0.3237	mg/L	0.00461	1.42%
Pb 220.353†	4375.5	0.5573	mg/L	0.00520	2.787	mg/L	0.0260	0.93%
Sb 206.836†	15.3	0.00511	mg/L	0.000766	0.02557	mg/L	0.003828	14.97%
Se 196.026†	2.9	0.00184	mg/L	0.005706	0.00920	mg/L	0.028529	310.26%
Si 288.158†	2682.1	1.249	mg/L	0.0445	6.244	mg/L	0.2225	3.56%
Sn 189.927†	-42.1	-0.00666	mg/L	0.000643	-0.03328	mg/L	0.003213	9.65%
Sr 421.552†	261012.8	0.2786	mg/L	0.00999	1.393	mg/L	0.0500	3.59%
Ti 334.903†	64881.4	3.112	mg/L	0.1148	15.56	mg/L	0.574	3.69%
Tl 190.801†	-20.0	0.00061	mg/L	0.000894	0.00307	mg/L	0.004470	145.59%
V 292.402†	22503.2	0.1678	mg/L	0.00114	0.8392	mg/L	0.00568	0.68%
Zn 206.200†	3121.7	0.7701	mg/L	0.02808	3.850	mg/L	0.1404	3.65%

Sequence No.: 6
Sample ID: VR33 J SWC

Autosampler Location: 359
Date Collected: 11/16/2012 3:47:09 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 J SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2187581.6	96.92	%	0.754				0.78%
ScR 361.383	280519.8	98.11	%	1.353				1.38%
Ag 328.068†	-91.6	-0.00045	mg/L	0.000027	-0.00227	mg/L	0.000137	6.05%
Al 308.215†	111572.9	62.64	mg/L	1.249	313.2	mg/L	6.24	1.99%
As 188.979†	-20.0	0.09814	mg/L	0.002726	0.4907	mg/L	0.01363	2.78%
B 249.677†	44.8	0.00560	mg/L	0.001049	0.02799	mg/L	0.005247	18.74%
Ba 233.527†	2641.4	0.5658	mg/L	0.00686	2.829	mg/L	0.0343	1.21%
Be 313.042†	1522.7	0.00220	mg/L	0.000075	0.01099	mg/L	0.000377	3.43%
Ca 317.933†	262712.6	18.50	mg/L	0.375	92.48	mg/L	1.877	2.03%
Cd 228.802†	1487.2	0.04611	mg/L	0.000364	0.2305	mg/L	0.00182	0.79%
Co 228.616†	2070.1	0.04993	mg/L	0.000476	0.2496	mg/L	0.00238	0.95%
Cr 267.716†	827.5	0.1339	mg/L	0.00150	0.6694	mg/L	0.00751	1.12%
Cu 324.752†	43903.8	0.1722	mg/L	0.00170	0.8610	mg/L	0.00851	0.99%
Fe 273.955†	131046.4	99.95	mg/L	2.398	499.7	mg/L	11.99	2.40%
K 766.490†	23597.7	11.84	mg/L	0.200	59.20	mg/L	0.999	1.69%
Mg 279.077†	46875.2	31.73	mg/L	0.658	158.7	mg/L	3.29	2.07%
Mn 257.610†	99026.3	2.738	mg/L	0.0620	13.69	mg/L	0.310	2.27%
Mo 202.031†	49.2	0.00224	mg/L	0.000273	0.01121	mg/L	0.001364	12.16%
Na 589.592†	8063.0	0.6328	mg/L	0.00791	3.164	mg/L	0.0395	1.25%
Na 330.237†	-16.3	-0.2206	mg/L	0.26292	-1.103	mg/L	1.3146	119.21%
Ni 231.604†	270.2	0.06556	mg/L	0.000253	0.3278	mg/L	0.00126	0.39%
Pb 220.353†	13726.5	1.726	mg/L	0.0095	8.632	mg/L	0.0475	0.55%
Sb 206.836†	35.3	0.01143	mg/L	0.000782	0.05717	mg/L	0.003909	6.84%
Se 196.026†	9.6	0.00628	mg/L	0.004233	0.03140	mg/L	0.021165	67.40%
Si 288.158†	2522.0	1.176	mg/L	0.0195	5.879	mg/L	0.0973	1.65%
Sn 189.927†	-6.7	0.00119	mg/L	0.001439	0.00594	mg/L	0.007197	121.06%
Sr 421.552†	161857.9	0.1728	mg/L	0.00330	0.8639	mg/L	0.01649	1.91%
Ti 334.903†	80050.7	3.840	mg/L	0.0786	19.20	mg/L	0.393	2.05%
Tl 190.801†	-18.6	0.00227	mg/L	0.000087	0.01133	mg/L	0.000436	3.85%
V 292.402†	29566.8	0.2211	mg/L	0.00271	1.106	mg/L	0.0136	1.23%
Zn 206.200†	6477.5	1.598	mg/L	0.0293	7.990	mg/L	0.1465	1.83%

Sequence No.: 7
Sample ID: VR33 K SWC

Autosampler Location: 360
Date Collected: 11/16/2012 3:51:10 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2196733.4	97.32	%	4.315				4.43%
ScR 361.383	278230.8	97.31	%	1.872				1.92%
Ag 328.068†	-84.0	-0.00044	mg/L	0.000124	-0.00220	mg/L	0.000620	28.23%
Al 308.215†	99829.7	56.05	mg/L	1.211	280.2	mg/L	6.05	2.16%
As 188.979†	-31.7	0.05383	mg/L	0.001389	0.2691	mg/L	0.00694	2.58%
B 249.677†	98.6	0.01251	mg/L	0.000370	0.06254	mg/L	0.001852	2.96%
Ba 233.527†	3902.4	0.8475	mg/L	0.01643	4.237	mg/L	0.0822	1.94%
Be 313.042†	1433.2	0.00210	mg/L	0.000063	0.01050	mg/L	0.000313	2.98%
Ca 317.933†	432413.3	30.44	mg/L	0.673	152.2	mg/L	3.36	2.21%
Cd 228.802†	762.6	0.02350	mg/L	0.001315	0.1175	mg/L	0.00658	5.60%
Co 228.616†	1391.5	0.03348	mg/L	0.001746	0.1674	mg/L	0.00873	5.21%
Cr 267.716†	754.7	0.1223	mg/L	0.00282	0.6113	mg/L	0.01411	2.31%
Cu 324.752†	26965.4	0.1065	mg/L	0.00612	0.5323	mg/L	0.03062	5.75%
Fe 273.955†	101980.9	77.78	mg/L	1.660	388.9	mg/L	8.30	2.13%
K 766.490†	22467.5	11.27	mg/L	0.250	56.36	mg/L	1.250	2.22%
Mg 279.077†	28079.3	19.00	mg/L	0.429	95.00	mg/L	2.143	2.26%
Mn 257.610†	118229.1	3.268	mg/L	0.0692	16.34	mg/L	0.346	2.12%
Mo 202.031†	61.0	0.00270	mg/L	0.000034	0.01351	mg/L	0.000171	1.27%
Na 589.592†	4716.6	0.3702	mg/L	0.00264	1.851	mg/L	0.0132	0.71%
Na 330.237†	-21.6	-0.5843	mg/L	0.18609	-2.921	mg/L	0.9304	31.85%
Ni 231.604†	286.5	0.06951	mg/L	0.000912	0.3476	mg/L	0.00456	1.31%
Pb 220.353†	6791.9	0.8591	mg/L	0.03922	4.296	mg/L	0.1961	4.57%
Sb 206.836†	21.3	0.00626	mg/L	0.002138	0.03130	mg/L	0.010690	34.15%
Se 196.026†	-3.2	-0.00221	mg/L	0.005312	-0.01107	mg/L	0.026561	239.92%
Si 288.158†	4886.3	2.273	mg/L	0.0381	11.36	mg/L	0.191	1.68%
Sn 189.927†	-40.0	-0.00609	mg/L	0.001001	-0.03046	mg/L	0.005003	16.42%
Sr 421.552†	275381.6	0.2940	mg/L	0.00631	1.470	mg/L	0.0315	2.15%
Ti 334.903†	52821.4	2.533	mg/L	0.0536	12.67	mg/L	0.268	2.12%
Tl 190.801†	-12.0	0.00291	mg/L	0.000928	0.01457	mg/L	0.004642	31.87%
V 292.402†	16419.7	0.1223	mg/L	0.00711	0.6113	mg/L	0.03557	5.82%
Zn 206.200†	5032.5	1.241	mg/L	0.0221	6.207	mg/L	0.1107	1.78%

Sequence No.: 8
Sample ID: VR33 L SWC

Autosampler Location: 361
Date Collected: 11/16/2012 3:55:11 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 L SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2333450.9	103.4	%	0.68				0.66%
ScR 361.383	301151.0	105.3	%	0.99				0.94%
Ag 328.068†	-156.1	-0.00085	mg/L	0.000101	-0.00424	mg/L	0.000505	11.92%
Al 308.215†	121696.2	68.33	mg/L	0.078	341.6	mg/L	0.39	0.11%
As 188.979†	-56.7	0.04785	mg/L	0.001275	0.2393	mg/L	0.00637	2.66%
B 249.677†	62.8	0.00792	mg/L	0.000132	0.03959	mg/L	0.000661	1.67%
Ba 233.527†	3187.7	0.6888	mg/L	0.00780	3.444	mg/L	0.0390	1.13%
Be 313.042†	1500.6	0.00220	mg/L	0.000035	0.01099	mg/L	0.000173	1.57%
Ca 317.933†	278715.6	19.62	mg/L	0.064	98.11	mg/L	0.319	0.33%
Cd 228.802†	364.8	0.01097	mg/L	0.000258	0.05486	mg/L	0.001292	2.35%
Co 228.616†	1645.8	0.04017	mg/L	0.000337	0.2008	mg/L	0.00168	0.84%
Cr 267.716†	575.2	0.09391	mg/L	0.001709	0.4695	mg/L	0.00855	1.82%
Cu 324.752†	22920.8	0.09118	mg/L	0.001056	0.4559	mg/L	0.00528	1.16%
Fe 273.955†	111187.4	84.80	mg/L	0.246	424.0	mg/L	1.23	0.29%
K 766.490†	21653.7	10.86	mg/L	0.044	54.32	mg/L	0.219	0.40%
Mg 279.077†	25440.5	17.21	mg/L	0.062	86.04	mg/L	0.312	0.36%
Mn 257.610†	119921.8	3.315	mg/L	0.0100	16.57	mg/L	0.050	0.30%
Mo 202.031†	46.2	0.00209	mg/L	0.000227	0.01043	mg/L	0.001133	10.87%
Na 589.592†	5131.9	0.4028	mg/L	0.00348	2.014	mg/L	0.0174	0.86%
Na 330.237†	-7.3	0.1489	mg/L	0.21807	0.7447	mg/L	1.09037	146.42%
Ni 231.604†	324.2	0.07868	mg/L	0.000664	0.3934	mg/L	0.00332	0.84%
Pb 220.353†	3113.0	0.4020	mg/L	0.00284	2.010	mg/L	0.0142	0.71%
Sb 206.836†	11.5	0.00378	mg/L	0.000699	0.01891	mg/L	0.003495	18.48%
Se 196.026†	10.4	0.00691	mg/L	0.004327	0.03457	mg/L	0.021635	62.59%
Si 288.158†	2642.5	1.230	mg/L	0.0155	6.150	mg/L	0.0773	1.26%
Sn 189.927†	-32.1	-0.00540	mg/L	0.000445	-0.02699	mg/L	0.002224	8.24%
Sr 421.552†	203421.9	0.2172	mg/L	0.00039	1.086	mg/L	0.0019	0.18%
Ti 334.903†	57600.0	2.763	mg/L	0.0042	13.81	mg/L	0.021	0.15%
Tl 190.801†	-12.3	0.00356	mg/L	0.000909	0.01780	mg/L	0.004547	25.54%
V 292.402†	16139.8	0.1196	mg/L	0.00135	0.5981	mg/L	0.00676	1.13%
Zn 206.200†	2782.1	0.6863	mg/L	0.00436	3.431	mg/L	0.0218	0.64%

Sequence No.: 9
Sample ID: CV 12

Autosampler Location: 7
Date Collected: 11/16/2012 3:59:13 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2262093.8	100.2	%	0.82				0.82%
ScR 361.383	285242.5	99.76	%	1.277				1.28%
Ag 328.068†	177297.2	1.004	mg/L	0.0098	1.004	mg/L	0.0098	0.97%
Al 308.215†	3668.7	2.026	mg/L	0.0246	2.026	mg/L	0.0246	1.21%
As 188.979†	3684.8	1.976	mg/L	0.0171	1.976	mg/L	0.0171	0.87%
B 249.677†	7560.6	0.9640	mg/L	0.01304	0.9640	mg/L	0.01304	1.35%
Ba 233.527†	4615.8	1.017	mg/L	0.0115	1.017	mg/L	0.0115	1.13%
Be 313.042†	636663.6	0.9571	mg/L	0.00725	0.9571	mg/L	0.00725	0.76%
Ca 317.933†	27619.3	1.944	mg/L	0.0144	1.944	mg/L	0.0144	0.74%
Cd 228.802†	33158.4	1.034	mg/L	0.0104	1.034	mg/L	0.0104	1.01%
Co 228.616†	35694.3	1.010	mg/L	0.0112	1.010	mg/L	0.0112	1.11%
Cr 267.716†	6396.4	1.029	mg/L	0.0126	1.029	mg/L	0.0126	1.22%
Cu 324.752†	260252.9	1.000	mg/L	0.0065	1.000	mg/L	0.0065	0.65%
Fe 273.955†	2748.6	2.089	mg/L	0.0251	2.089	mg/L	0.0251	1.20%
K 766.490†	39776.0	19.96	mg/L	0.149	19.96	mg/L	0.149	0.75%
Mg 279.077†	2975.6	2.025	mg/L	0.0201	2.025	mg/L	0.0201	0.99%
Mn 257.610†	36379.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.75%
Mo 202.031†	20104.7	1.002	mg/L	0.0099	1.002	mg/L	0.0099	0.99%
Na 589.592†	624041.4	48.98	mg/L	0.485	48.98	mg/L	0.485	0.99%
Na 330.237†	1496.6	51.99	mg/L	0.360	51.99	mg/L	0.360	0.69%
Ni 231.604†	3988.9	0.9682	mg/L	0.01173	0.9682	mg/L	0.01173	1.21%
Pb 220.353†	15597.9	1.950	mg/L	0.0203	1.950	mg/L	0.0203	1.04%
Sb 206.836†	6980.2	2.134	mg/L	0.0238	2.134	mg/L	0.0238	1.12%
Se 196.026†	2898.1	1.945	mg/L	0.0180	1.945	mg/L	0.0180	0.92%
Si 288.158†	4489.2	2.085	mg/L	0.0323	2.085	mg/L	0.0323	1.55%
Sn 189.927†	3986.1	1.024	mg/L	0.0100	1.024	mg/L	0.0100	0.97%
Sr 421.552†	897083.4	0.9577	mg/L	0.00869	0.9577	mg/L	0.00869	0.91%
Ti 334.903†	21320.0	1.022	mg/L	0.0097	1.022	mg/L	0.0097	0.95%
Tl 190.801†	4971.3	1.936	mg/L	0.0198	1.936	mg/L	0.0198	1.02%
V 292.402†	133567.7	1.024	mg/L	0.0098	1.024	mg/L	0.0098	0.96%
Zn 206.200†	4041.0	0.9966	mg/L	0.01025	0.9966	mg/L	0.01025	1.03%

Sequence No.: 10
Sample ID: CB 12

Autosampler Location: 1
Date Collected: 11/16/2012 4:04:19 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2269012.6	100.5	%	0.64				0.63%
ScR 361.383	292450.1	102.3	%	2.50				2.44%
Ag 328.068†	76.3	0.00043	mg/L	0.000049	0.00043	mg/L	0.000049	11.33%
Al 308.215†	17.0	0.00956	mg/L	0.004765	0.00956	mg/L	0.004765	49.86%
As 188.979†	0.4	0.00024	mg/L	0.000464	0.00024	mg/L	0.000464	196.09%
B 249.677†	7.6	0.00097	mg/L	0.001303	0.00097	mg/L	0.001303	134.09%
Ba 233.527†	-5.0	-0.00109	mg/L	0.000741	-0.00109	mg/L	0.000741	67.67%
Be 313.042†	92.8	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.52%
Ca 317.933†	49.0	0.00345	mg/L	0.001132	0.00345	mg/L	0.001132	32.82%
Cd 228.802†	-11.4	-0.00036	mg/L	0.000146	-0.00036	mg/L	0.000146	40.24%
Co 228.616†	-6.2	-0.00018	mg/L	0.000030	-0.00018	mg/L	0.000030	16.80%
Cr 267.716†	-3.9	-0.00062	mg/L	0.000888	-0.00062	mg/L	0.000888	142.32%
Cu 324.752†	-45.1	-0.00017	mg/L	0.000129	-0.00017	mg/L	0.000129	74.17%
Fe 273.955†	16.8	0.01280	mg/L	0.004378	0.01280	mg/L	0.004378	34.22%
K 766.490†	7.0	0.00350	mg/L	0.008391	0.00350	mg/L	0.008391	239.82%
Mg 279.077†	-2.5	-0.00169	mg/L	0.004610	-0.00169	mg/L	0.004610	273.27%
Mn 257.610†	4.0	0.00011	mg/L	0.000060	0.00011	mg/L	0.000060	54.98%
Mo 202.031†	15.6	0.00078	mg/L	0.000076	0.00078	mg/L	0.000076	9.77%
Na 589.592†	94.2	0.00739	mg/L	0.003626	0.00739	mg/L	0.003626	49.04%
Na 330.237†	1.4	0.04796	mg/L	0.404095	0.04796	mg/L	0.404095	842.57%
Ni 231.604†	-1.9	-0.00046	mg/L	0.000628	-0.00046	mg/L	0.000628	135.18%
Pb 220.353†	0.0	0.00000	mg/L	0.000855	0.00000	mg/L	0.000855	>999.9%
Sb 206.836†	7.3	0.00224	mg/L	0.001437	0.00224	mg/L	0.001437	64.09%
Se 196.026†	3.5	0.00236	mg/L	0.002542	0.00236	mg/L	0.002542	107.52%
Si 288.158†	8.1	0.00377	mg/L	0.006244	0.00377	mg/L	0.006244	165.58%
Sn 189.927†	-0.8	-0.00021	mg/L	0.000097	-0.00021	mg/L	0.000097	45.84%
Sr 421.552†	159.9	0.00017	mg/L	0.000035	0.00017	mg/L	0.000035	20.75%
Ti 334.903†	16.7	0.00080	mg/L	0.000917	0.00080	mg/L	0.000917	114.24%
Tl 190.801†	5.9	0.00231	mg/L	0.000739	0.00231	mg/L	0.000739	31.93%
V 292.402†	-37.1	-0.00029	mg/L	0.000090	-0.00029	mg/L	0.000090	31.40%
Zn 206.200†	-1.2	-0.00031	mg/L	0.000290	-0.00031	mg/L	0.000290	94.22%

Sequence No.: 11
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 4:08:35 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2284761.1	101.2	%	1.22				1.21%
ScR 361.383	290090.7	101.5	%	1.08				1.06%
Ag 328.068†	564.4	0.00319	mg/L	0.000242	0.00319	mg/L	0.000242	7.58%
Al 308.215†	108.6	0.06085	mg/L	0.006318	0.06085	mg/L	0.006318	10.38%
As 188.979†	88.6	0.04707	mg/L	0.002570	0.04707	mg/L	0.002570	5.46%
B 249.677†	156.9	0.02002	mg/L	0.001066	0.02002	mg/L	0.001066	5.33%
Ba 233.527†	10.5	0.00229	mg/L	0.000113	0.00229	mg/L	0.000113	4.94%
Be 313.042†	667.0	0.00100	mg/L	0.000015	0.00100	mg/L	0.000015	1.49%
Ca 317.933†	728.3	0.05128	mg/L	0.000186	0.05128	mg/L	0.000186	0.36%
Cd 228.802†	59.4	0.00157	mg/L	0.000146	0.00157	mg/L	0.000146	9.30%
Co 228.616†	112.6	0.00318	mg/L	0.000055	0.00318	mg/L	0.000055	1.74%
Cr 267.716†	28.0	0.00450	mg/L	0.001876	0.00450	mg/L	0.001876	41.70%
Cu 324.752†	447.8	0.00172	mg/L	0.000099	0.00172	mg/L	0.000099	5.74%
Fe 273.955†	82.4	0.06283	mg/L	0.002076	0.06283	mg/L	0.002076	3.30%
K 766.490†	994.1	0.4988	mg/L	0.01164	0.4988	mg/L	0.01164	2.33%
Mg 279.077†	76.6	0.05193	mg/L	0.000896	0.05193	mg/L	0.000896	1.73%
Mn 257.610†	33.1	0.00092	mg/L	0.000068	0.00092	mg/L	0.000068	7.42%
Mo 202.031†	99.2	0.00494	mg/L	0.000109	0.00494	mg/L	0.000109	2.21%
Na 589.592†'	5937.4	0.4660	mg/L	0.00283	0.4660	mg/L	0.00283	0.61%
Na 330.237†	18.7	0.6502	mg/L	0.31375	0.6502	mg/L	0.31375	48.26%
Ni 231.604†	35.6	0.00864	mg/L	0.000914	0.00864	mg/L	0.000914	10.58%
Pb 220.353†	167.3	0.02093	mg/L	0.000542	0.02093	mg/L	0.000542	2.59%
Sb 206.836†	168.6	0.05160	mg/L	0.000157	0.05160	mg/L	0.000157	0.30%
Se 196.026†	80.6	0.05412	mg/L	0.003062	0.05412	mg/L	0.003062	5.66%
Si 288.158†	142.0	0.06596	mg/L	0.003587	0.06596	mg/L	0.003587	5.44%
Sn 189.927†	34.2	0.00882	mg/L	0.000799	0.00882	mg/L	0.000799	9.06%
Sr 421.552†	966.0	0.00103	mg/L	0.000014	0.00103	mg/L	0.000014	1.38%
Ti 334.903†	126.7	0.00607	mg/L	0.000925	0.00607	mg/L	0.000925	15.23%
Tl 190.801†	122.5	0.04789	mg/L	0.000959	0.04789	mg/L	0.000959	2.00%
V 292.402†	362.3	0.00278	mg/L	0.000143	0.00278	mg/L	0.000143	5.13%
Zn 206.200†	35.5	0.00874	mg/L	0.000417	0.00874	mg/L	0.000417	4.77%

Sequence No.: 12
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 4:12:52 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2238641.2	99.18	%	0.196				0.20%
ScR 361.383	283194.8	99.04	%	0.662				0.67%
Ag 328.068†	-159.0	-0.00090	mg/L	0.000206	-0.00090	mg/L	0.000206	22.98%
Al 308.215†	352569.5	198.0	mg/L	2.30	198.0	mg/L	2.30	1.16%
As 188.979†	41.5	0.01641	mg/L	0.002915	0.01641	mg/L	0.002915	17.76%
B 249.677†	-27.9	-0.00356	mg/L	0.001822	-0.00356	mg/L	0.001822	51.13%
Ba 233.527†	133.7	-0.00288	mg/L	0.000472	-0.00288	mg/L	0.000472	16.39%
Be 313.042†	111.8	0.00017	mg/L	0.000011	0.00017	mg/L	0.000011	6.83%
Ca 317.933†	1405409.6	98.95	mg/L	1.308	98.95	mg/L	1.308	1.32%
Cd 228.802†	45.6	-0.00059	mg/L	0.000181	-0.00059	mg/L	0.000181	30.80%
Co 228.616†	60.9	-0.00086	mg/L	0.000267	-0.00086	mg/L	0.000267	31.08%
Cr 267.716†	1.1	-0.00149	mg/L	0.000999	-0.00149	mg/L	0.000999	67.01%
Cu 324.752†	-2154.8	-0.00038	mg/L	0.000096	-0.00038	mg/L	0.000096	25.22%
Fe 273.955†	259131.0	197.6	mg/L	2.30	197.6	mg/L	2.30	1.17%
K 766.490†	-15.8	-0.00792	mg/L	0.009741	-0.00792	mg/L	0.009741	123.06%
Mg 279.077†	145616.7	98.64	mg/L	1.242	98.64	mg/L	1.242	1.26%
Mn 257.610†	24.6	0.00067	mg/L	0.000237	0.00067	mg/L	0.000237	35.68%
Mo 202.031†	44.4	0.00114	mg/L	0.000093	0.00114	mg/L	0.000093	8.18%
Na 589.592†	163.7	0.01285	mg/L	0.002347	0.01285	mg/L	0.002347	18.27%
Na 330.237†	-9.6	-0.3338	mg/L	0.22885	-0.3338	mg/L	0.22885	68.57%
Ni 231.604†	-0.1	-0.00001	mg/L	0.000948	-0.00001	mg/L	0.000948	>999.9%
Pb 220.353†	-292.9	0.00265	mg/L	0.000949	0.00265	mg/L	0.000949	35.86%
Sb 206.836†	14.0	0.00415	mg/L	0.002753	0.00415	mg/L	0.002753	66.27%
Se 196.026†	21.3	0.01432	mg/L	0.001654	0.01432	mg/L	0.001654	11.55%
Si 288.158†	-24.0	0.00081	mg/L	0.004498	0.00081	mg/L	0.004498	558.64%
Sn 189.927†	-76.7	-0.00743	mg/L	0.001517	-0.00743	mg/L	0.001517	20.41%
Sr 421.552†	3674.6	0.00392	mg/L	0.000008	0.00392	mg/L	0.000008	0.21%
Ti 334.903†	147.9	0.00237	mg/L	0.000181	0.00237	mg/L	0.000181	7.64%
Tl 190.801†	-52.9	0.00040	mg/L	0.003526	0.00040	mg/L	0.003526	879.94%
V 292.402†	1463.6	0.00427	mg/L	0.000173	0.00427	mg/L	0.000173	4.05%
Zn 206.200†	7.7	0.00191	mg/L	0.000698	0.00191	mg/L	0.000698	36.59%

Sequence No.: 13
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 4:17:09 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2238392.5	99.17	%	1.003				1.01%
ScR 361.383	283102.7	99.01	%	1.472				1.49%
Ag 328.068†	173829.6	0.9840	mg/L	0.00766	0.9840	mg/L	0.00766	0.78%
Al 308.215†	350678.6	196.9	mg/L	3.60	196.9	mg/L	3.60	1.83%
As 188.979†	1907.4	1.003	mg/L	0.0150	1.003	mg/L	0.0150	1.49%
B 249.677†	-10.8	-0.00340	mg/L	0.000656	-0.00340	mg/L	0.000656	19.31%
Ba 233.527†	4776.9	1.020	mg/L	0.0199	1.020	mg/L	0.0199	1.95%
Be 313.042†	645690.1	0.9707	mg/L	0.01808	0.9707	mg/L	0.01808	1.86%
Ca 317.933†	1417527.9	99.80	mg/L	1.888	99.80	mg/L	1.888	1.89%
Cd 228.802†	33126.2	1.038	mg/L	0.0069	1.038	mg/L	0.0069	0.66%
Co 228.616†	34667.0	0.9804	mg/L	0.00623	0.9804	mg/L	0.00623	0.63%
Cr 267.716†	6468.8	1.039	mg/L	0.0176	1.039	mg/L	0.0176	1.69%
Cu 324.752†	265360.5	1.029	mg/L	0.0077	1.029	mg/L	0.0077	0.74%
Fe 273.955†	261260.6	199.3	mg/L	4.32	199.3	mg/L	4.32	2.17%
K 766.490†	-95.8	-0.04804	mg/L	0.017775	-0.04804	mg/L	0.017775	37.00%
Mg 279.077†	146511.1	99.25	mg/L	2.013	99.25	mg/L	2.013	2.03%
Mn 257.610†	35908.9	0.9927	mg/L	0.01982	0.9927	mg/L	0.01982	2.00%
Mo 202.031†	44.2	0.00107	mg/L	0.000306	0.00107	mg/L	0.000306	28.69%
Na 589.592†	297.6	0.02336	mg/L	0.001574	0.02336	mg/L	0.001574	6.74%
Na 330.237†	-0.7	-0.3352	mg/L	0.17063	-0.3352	mg/L	0.17063	50.90%
Ni 231.604†	3934.8	0.9549	mg/L	0.01739	0.9549	mg/L	0.01739	1.82%
Pb 220.353†	7540.9	0.9820	mg/L	0.01102	0.9820	mg/L	0.01102	1.12%
Sb 206.836†	3412.6	1.032	mg/L	0.0097	1.032	mg/L	0.0097	0.94%
Se 196.026†	1487.5	0.9980	mg/L	0.00594	0.9980	mg/L	0.00594	0.60%
Si 288.158†	-27.4	0.00302	mg/L	0.005149	0.00302	mg/L	0.005149	170.21%
Sn 189.927†	-76.7	-0.00684	mg/L	0.000857	-0.00684	mg/L	0.000857	12.53%
Sr 421.552†	3680.7	0.00393	mg/L	0.000075	0.00393	mg/L	0.000075	1.91%
Ti 334.903†	138.0	0.00165	mg/L	0.000474	0.00165	mg/L	0.000474	28.75%
Tl 190.801†	2324.1	0.9211	mg/L	0.00879	0.9211	mg/L	0.00879	0.95%
V 292.402†	129241.3	0.9845	mg/L	0.00692	0.9845	mg/L	0.00692	0.70%
Zn 206.200†	3846.6	0.9488	mg/L	0.01871	0.9488	mg/L	0.01871	1.97%

Sequence No.: 14
Sample ID: CV 13

Autosampler Location: 7
Date Collected: 11/16/2012 4:20:59 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2273298.0	100.7	%	0.34				0.34%
ScR 361.383	290143.1	101.5	%	0.56				0.55%
Ag 328.068†	171234.4	0.9693	mg/L	0.00454	0.9693	mg/L	0.00454	0.47%
Al 308.215†	3659.6	2.020	mg/L	0.0114	2.020	mg/L	0.0114	0.56%
As 188.979†	3663.5	1.965	mg/L	0.0035	1.965	mg/L	0.0035	0.18%
B 249.677†	7389.3	0.9421	mg/L	0.00212	0.9421	mg/L	0.00212	0.22%
Ba 233.527†	4560.8	1.005	mg/L	0.0076	1.005	mg/L	0.0076	0.76%
Be 313.042†	632518.6	0.9509	mg/L	0.00784	0.9509	mg/L	0.00784	0.82%
Ca 317.933†	29116.4	2.050	mg/L	0.0058	2.050	mg/L	0.0058	0.28%
Cd 228.802†	33218.1	1.036	mg/L	0.0062	1.036	mg/L	0.0062	0.59%
Co 228.616†	35894.8	1.016	mg/L	0.0052	1.016	mg/L	0.0052	0.51%
Cr 267.716†	6304.6	1.014	mg/L	0.0027	1.014	mg/L	0.0027	0.27%
Cu 324.752†	260382.7	1.001	mg/L	0.0034	1.001	mg/L	0.0034	0.34%
Fe 273.955†	2776.6	2.111	mg/L	0.0091	2.111	mg/L	0.0091	0.43%
K 766.490†	39289.2	19.71	mg/L	0.165	19.71	mg/L	0.165	0.84%
Mg 279.077†	2962.0	2.016	mg/L	0.0208	2.016	mg/L	0.0208	1.03%
Mn 257.610†	37207.2	1.029	mg/L	0.0037	1.029	mg/L	0.0037	0.36%
Mo 202.031†	20592.5	1.026	mg/L	0.0016	1.026	mg/L	0.0016	0.16%
Na 589.592†	612762.1	48.09	mg/L	0.373	48.09	mg/L	0.373	0.78%
Na 330.237†	1462.7	50.81	mg/L	0.102	50.81	mg/L	0.102	0.20%
Ni 231.604†	3945.6	0.9577	mg/L	0.00464	0.9577	mg/L	0.00464	0.48%
Pb 220.353†	16062.0	2.008	mg/L	0.0011	2.008	mg/L	0.0011	0.05%
Sb 206.836†	6924.2	2.117	mg/L	0.0037	2.117	mg/L	0.0037	0.17%
Se 196.026†	2896.0	1.944	mg/L	0.0036	1.944	mg/L	0.0036	0.19%
Si 288.158†	4408.7	2.048	mg/L	0.0062	2.048	mg/L	0.0062	0.30%
Sn 189.927†	3962.6	1.018	mg/L	0.0003	1.018	mg/L	0.0003	0.03%
Sr 421.552†	883120.3	0.9427	mg/L	0.00680	0.9427	mg/L	0.00680	0.72%
Ti 334.903†	21769.8	1.043	mg/L	0.0036	1.043	mg/L	0.0036	0.34%
Tl 190.801†	4948.9	1.927	mg/L	0.0042	1.927	mg/L	0.0042	0.22%
V 292.402†	131171.1	1.006	mg/L	0.0054	1.006	mg/L	0.0054	0.53%
Zn 206.200†	4039.0	0.9961	mg/L	0.00469	0.9961	mg/L	0.00469	0.47%

Sequence No.: 15
Sample ID: CB 13
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 4:25:06 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2286126.7	101.3	%	0.90				0.89%
ScR 361.383	289664.1	101.3	%	0.89				0.88%
Ag 328.068†	54.9	0.00031	mg/L	0.000128	0.00031	mg/L	0.000128	41.13%
Al 308.215†	50.1	0.02811	mg/L	0.005220	0.02811	mg/L	0.005220	18.57%
As 188.979†	-2.6	-0.00138	mg/L	0.001374	-0.00138	mg/L	0.001374	99.35%
B 249.677†	5.9	0.00076	mg/L	0.000758	0.00076	mg/L	0.000758	99.99%
Ba 233.527†	-0.7	-0.00015	mg/L	0.000249	-0.00015	mg/L	0.000249	162.68%
Be 313.042†	157.5	0.00024	mg/L	0.000019	0.00024	mg/L	0.000019	7.95%
Ca 317.933†	200.6	0.01412	mg/L	0.000526	0.01412	mg/L	0.000526	3.73%
Cd 228.802†	-10.7	-0.00033	mg/L	0.000041	-0.00033	mg/L	0.000041	12.45%
Co 228.616†	-4.0	-0.00011	mg/L	0.000132	-0.00011	mg/L	0.000132	115.31%
Cr 267.716†	-11.6	-0.00187	mg/L	0.000890	-0.00187	mg/L	0.000890	47.61%
Cu 324.752†	-39.6	-0.00015	mg/L	0.000090	-0.00015	mg/L	0.000090	59.60%
Fe 273.955†	40.4	0.03079	mg/L	0.003013	0.03079	mg/L	0.003013	9.78%
K 766.490†	32.0	0.01605	mg/L	0.019384	0.01605	mg/L	0.019384	120.81%
Mg 279.077†	21.5	0.01459	mg/L	0.004491	0.01459	mg/L	0.004491	30.78%
Mn 257.610†	3.3	0.00009	mg/L	0.000053	0.00009	mg/L	0.000053	57.61%
Mo 202.031†	12.2	0.00061	mg/L	0.000185	0.00061	mg/L	0.000185	30.43%
Na 589.592†	67.8	0.00532	mg/L	0.003612	0.00532	mg/L	0.003612	67.90%
Na 330.237†	-7.2	-0.2497	mg/L	0.79464	-0.2497	mg/L	0.79464	318.28%
Ni 231.604†	-2.5	-0.00060	mg/L	0.001044	-0.00060	mg/L	0.001044	174.55%
Pb 220.353†	10.9	0.00136	mg/L	0.000588	0.00136	mg/L	0.000588	43.17%
Sb 206.836†	9.9	0.00305	mg/L	0.001565	0.00305	mg/L	0.001565	51.35%
Se 196.026†	1.3	0.00088	mg/L	0.002604	0.00088	mg/L	0.002604	294.65%
Si 288.158†	6.0	0.00278	mg/L	0.005514	0.00278	mg/L	0.005514	198.12%
Sn 189.927†	-2.5	-0.00065	mg/L	0.000578	-0.00065	mg/L	0.000578	89.03%
Sr 421.552†	186.5	0.00020	mg/L	0.000030	0.00020	mg/L	0.000030	15.15%
Ti 334.903†	4.3	0.00021	mg/L	0.000738	0.00021	mg/L	0.000738	355.74%
Tl 190.801†	4.0	0.00156	mg/L	0.000202	0.00156	mg/L	0.000202	12.96%
V 292.402†	-3.6	-0.00004	mg/L	0.000067	-0.00004	mg/L	0.000067	183.92%
Zn 206.200†	-1.0	-0.00025	mg/L	0.000543	-0.00025	mg/L	0.000543	215.90%

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 1 **of** 7

All corrections made by analyst unless otherwise noted. 11.15.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
Z		ZZZZZZ			~~2926-7~~
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{67}Zn high
		LR200			
		LR300			Ag low
		B1			
		B2			
		B3			
		CCV2			Mo low
		CCB2			
		VR31 MB1	SWN	20	
		1 MB1SPK	↓	↓	✓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 2 of 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR31 A-L	SWN	100	~~rr Mn, Ba (500x)~~
		A		20	~~rr Mn, Ba 100x~~ (CAF)
		ADUP			Ni high RPD
		ASPK			Sb low %R
		APOST			0.04mL PMS spk #2 (1/10) Sb 0.04mL PMS spk #1 (1/10)
		C			~~rr Mn, Ba 100x~~
		D			~~rr Mn 100x~~
		E			~~rr Mn, Ba 100x~~
		CCV3			
		CCB3			
		VR31 J	SWN	20	~~rr Mn 100x~~
		F			
		H			
		K		100	~~Mn~~ Pb Zn
		K		20	
		L			~~rr Mn 100x~~
		I			
		G			
		B		400	~~Mn Ba~~ Zn
		B		20	
		CCV4			
		CCB4			
		VR30 MB1	SWN	20	
		MB1SPK			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 3 **of** 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 A-L	SWN	100 ✓	~~rr 1000x~~
		A		20	~~rr Mn, Ba 200x~~ (CAF)
		ADUP		✓	↓
		ASPK			PDST; Sb low % R ~~rr Mn, Ba 200x~~
		APOST			Sb
		B			
		C			
		D			
		CCV5			
		CCB5			
		VR32 MB1	SWN	20	rr Be
		↓ MB1SPK		✓	
		VR30 E			
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV6			Be high, Mo low
		CCB6			As2 high
		STD 0			
		CCV7			Be high; Ag, Mo low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 4 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB7			
		VR32 A-L	SWN	100	rr Be, Ag V=11.31.
		A		20	CAP
		ADUP		↓	
		ASPK			Zn Sb low Y-R
		APOST			0.06mL PMSspk#1 to 10 0.06mL PMSspk#2 to 10 Sb; Zn
		B			rr Be, Ag
		C			
		D			
		E			; rr V, Cr, Co (Sc high)
		F			
		CCV8			Be high, Ag low
		CCB8			
		VR33 MBI	SWN	20	rr Be, Ag
		↓ MBISPK			
		VR32 G			
		H			
		I			
		J			
		K			
		L			rr V, Cr, Co (Sc high) rr Pb Zn (100x)
		VR33 B			
		↓ C			rr V, Cr, Co (Sc high) rr Pb, Zn
		CCV9			Mo, Ag low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 5 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB9			
		VR33 A-L	SWN	100	(400x) (500x) Cd-10 4%. rr Ag, Pb, Zn
		A		20	CAF
		ADUP			Ni high RPD
		ASPK			Sb low I.R
		APOST			Sb 0.06mL PMS spk #1 4/10 0.06mL PMS spk #2 4/10
		D			rr Ag
		E			rr Ag, Zn
		F			rr Ag
		G			
		H			
		CCV10			Mo, Ag low
		CCB10			
		VR34 MB1	SWN	20	rr Ag, Be
		MB1SPK			
		VR33 I			
		J			rr Zn, Pb 100x
		K			rr Zn 100x
		L			
		VR34 B			rr Pb (100x)
		C			
		D			rr Pb, Zn 100x
		E			
		CCV11			Be high; Mo, Ag low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 6 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB11			
		VR34 A-L	SWN	100	rr Ag, Be, Pb, Zn Cd=10.6 1.
		A		20	rr Ag, Be rr Zn Pb (100x) (CAF)
		ADUP			
		ASPK			Sb low'l.R
		APOST			Sb 0.06mL PMSspk#1 1/10 0.06mL PMSspk#2 1/10
		F			rr Ag, Be (20x); rr Pb Zn 100x
		G			
		H			; rr Zn 100x
		I			rr Pb Zn 100x
		J			
		CCV12			Mo, Ag low
		CCB12			
		VR73 MB1	REN	2	rr Ag
		MB1SPK			
		A			rr Mn Zn 1/20
		B			
		C			rr Mn 1/20
		D			
		F			
		H			
		VR34 K	SWN	20	rr Zn, Pb 1/100
		L			
		CCV13			Mo, Ag Low

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, November 15, 2012 11:25:14
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1275
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3053.4	3053.360	71.071	2.3	Standard
	Mg	24.0	29322.9	29322.904	322.760	1.1	Standard
	In	114.9	78650.2	78650.220	497.933	0.6	Standard
	Pb	208.0	34955.6	34955.628	120.271	0.3	Standard
	U	238.1	61022.0	61022.015	440.425	0.7	Standard
⌜	CeO	155.9	1000.7	0.013	0.000	3.8	Standard
| >	Ce	139.9	76266.2	76266.222	634.937	0.8	Standard
⌞	Ce++	70.0	657.5	0.009	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

VR33 : 00230

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

)timization Summary

iartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 11/15/2012 11:25:12 AM
id Time: 11/15/2012 11:27:47 AM

ily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3053.36
Obtained Intensity (Mg 23.985): 29322.90
Obtained Intensity (In 114.904): 78650.22
Obtained Intensity (Pb 207.977): 34955.63
Obtained Intensity (U 238.05): 61022.02
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.013 (=1000.66 / 76266.22)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=657.49 / 76266.22)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:17:32 AM
nd Time: 11/15/2012 11:19:44 AM

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.708)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

SmartTune Wizard - Summary

ptimization Summary

nartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:20:57 AM
nd Time: 11/15/2012 11:25:08 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 11:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				726304	0
	Be	9		ug/L				5	53
	C	13		ug/L				58801	3
	Cl	37		ug/L				3025336	4
>	Sc	45		ug/L				671354	1
	V	51		ug/L				5156	3
	V-1	51		ug/L				130	18
	Cr	52		ug/L				15247	2
	Cr	53		ug/L				115	5
	Mn	55		ug/L				250	8
	Co	59		ug/L				40	11
>	Ge	72		ug/L				457613	0
	Ni	60		ug/L				22	30
	Ni	62		ug/L				29	10
	Cu	63		ug/L				58	22
	Cu	65		ug/L				28	19
	Zn	66		ug/L				143	10
	Zn	67		ug/L				23	23
	Zn	68		ug/L				137	9
	As	75		ug/L				267	5
	As-1	75		ug/L				8149	1
	Se	82		ug/L				-5	14
	Se	78		ug/L				8278	1
	Mo	98		ug/L				17	21
	Y	89		ug/L				298590	2
	Kr	83		ug/L				554	4
>	In	115		ug/L				979916	1
	Ag	107		ug/L				15	17
	Cd	111		ug/L				63	6
	Cd	114		ug/L				30	9
	Sb	121		ug/L				102	39
	Sb	123		ug/L				72	14
	Ba	135		ug/L				11	13
	Ba	137		ug/L				17	10
>	Tb	159		ug/L				1160798	1
	Tl	205		ug/L				51	19
	Pb	208		ug/L				139	3
	Bi	209		ug/L				2367270	0
	Th	232		ug/L				21	59
	U	238		ug/L				3	41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:03:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	721999	0
[	Be	9	0.200	ug/L	0.008	4	5	500	4
	C	13		ug/L			58801	61004	4
	Cl	37		ug/L			3025336	2900221	1
[>	Sc	45		ug/L			671354	664677	2
[	V	51	0.200	ug/L	0.030	14	5156	8058	3
[	V-1	51	0.200	ug/L	0.013	6	130	2979	4
[	Cr	52	0.500	ug/L	0.070	13	15247	21420	2
[	Cr	53	0.500	ug/L	0.016	3	115	796	3
[	Mn	55	0.500	ug/L	0.009	1	250	8460	2
[	Co	59	0.200	ug/L	0.008	3	40	2660	0
[>	Ge	72		ug/L			457613	458359	0
[	Ni	60	0.500	ug/L	0.006	1	22	1424	1
[	Ni	62	0.500	ug/L	0.031	6	29	219	5
[	Cu	63	0.500	ug/L	0.003	0	58	3329	0
[	Cu	65	0.500	ug/L	0.016	3	28	1508	2
[	Zn	66	4.000	ug/L	0.074	1	143	7230	1
[	Zn	67	4.000	ug/L	0.084	2	23	1119	2
[	Zn	68	4.000	ug/L	0.105	2	137	5189	2
[	As	75	0.200	ug/L	0.011	5	267	631	3
[	As-1	75	0.200	ug/L	0.037	18	8149	8627	1
[	Se	82	0.500	ug/L	0.027	5	-5	100	5
[	Se	78	0.500	ug/L	0.090	17	8278	8635	1
[	Mo	98	0.200	ug/L	0.006	2	17	886	2
	Y	89		ug/L			298590	302917	1
	Kr	83		ug/L			554	520	1
[>	In	115		ug/L			979916	996805	0
[	Ag	107	0.200	ug/L	0.001	0	15	3021	1
[	Cd	111	0.100	ug/L	0.004	3	63	592	4
[	Cd	114	0.100	ug/L	0.006	6	30	1237	6
[	Sb	121	0.200	ug/L	0.006	2	102	3067	2
[	Sb	123	0.200	ug/L	0.008	3	72	2282	3
[	Ba	135	0.500	ug/L	0.004	0	11	2172	1
[	Ba	137	0.500	ug/L	0.019	3	17	3761	3
[>	Tb	159		ug/L			1160798	1148209	0
[	Tl	205	0.200	ug/L	0.002	0	51	7419	0
[	Pb	208	0.100	ug/L	0.001	0	139	5039	0
[	Bi	209		ug/L			2367270	2396482	1
[	Th	232	0.200	ug/L	0.003	1	21	8440	1
[	U	238	0.200	ug/L	0.003	1	3	9178	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	716986	1
[	Be	9	10.000	ug/L	0.111	1	5	23410	2
	C	13		ug/L			58801	59693	6
	Cl	37		ug/L			3025336	2984447	0
[>	Sc	45		ug/L			671354	674326	1
|	V	51	10.000	ug/L	0.329	3	5156	143597	4
|	V-1	51	10.000	ug/L	0.247	2	130	139693	3
|	Cr	52	9.998	ug/L	0.079	0	15247	135864	1
|	Cr	53	10.000	ug/L	0.488	4	115	14104	3
|	Mn	55	10.000	ug/L	0.102	1	250	167408	2
[	Co	59	10.000	ug/L	0.402	4	40	131071	2
[>	Ge	72		ug/L			457613	466494	1
|	Ni	60	9.999	ug/L	0.357	3	22	27973	2
|	Ni	62	10.001	ug/L	0.253	2	29	4073	1
|	Cu	63	9.999	ug/L	0.466	4	58	64397	2
|	Cu	65	9.999	ug/L	0.131	1	28	29424	0
|	Zn	66	9.955	ug/L	0.279	2	143	17603	1
|	Zn	67	10.070	ug/L	0.071	0	23	2958	2
|	Zn	68	9.958	ug/L	0.281	2	137	12610	0
|	As	75	9.999	ug/L	0.082	0	267	15856	1
|	As-1	75	9.998	ug/L	0.137	1	8149	23661	0
|	Se	82	9.994	ug/L	0.150	1	-5	1757	1
|	Se	78	9.984	ug/L	0.305	3	8278	12676	0
[	Mo	98	10.000	ug/L	0.223	2	17	46183	0
	Y	89		ug/L			298590	304853	1
	Kr	83		ug/L			554	549	4
[>	In	115		ug/L			979916	992778	1
|	Ag	107	10.000	ug/L	0.156	1	15	149069	0
|	Cd	111	10.000	ug/L	0.103	1	63	50207	0
|	Cd	114	10.000	ug/L	0.224	2	30	124907	1
|	Sb	121	10.000	ug/L	0.138	1	102	155372	0
|	Sb	123	10.000	ug/L	0.320	3	72	118774	1
|	Ba	135	10.000	ug/L	0.135	1	11	43103	0
[	Ba	137	10.000	ug/L	0.163	1	17	73732	0
[>	Tb	159		ug/L			1160798	1162542	0
|	Tl	205	10.000	ug/L	0.132	1	51	352078	1
|	Pb	208	10.000	ug/L	0.169	1	139	470524	0
|	Bi	209		ug/L			2367270	2386666	1
|	Th	232	10.000	ug/L	0.184	1	21	436902	1
[	U	238	10.000	ug/L	0.143	1	3	458868	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:11:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	707275	1
[	Be	9	19.974	ug/L	0.190	0	5	45872	0
	C	13		ug/L			58801	57702	2
	Cl	37		ug/L			3025336	3009285	0
[>	Sc	45		ug/L			671354	673020	0
[	V	51	20.015	ug/L	0.101	0	5156	282424	0
[	V-1	51	20.021	ug/L	0.178	0	130	280146	0
[	Cr	52	19.955	ug/L	0.128	0	15247	253280	0
[	Cr	53	19.977	ug/L	0.428	2	115	27892	2
[	Mn	55	19.961	ug/L	0.737	3	250	330718	3
[	Co	59	19.975	ug/L	0.174	0	40	260070	1
[>	Ge	72		ug/L			457613	463277	1
[	Ni	60	20.120	ug/L	0.373	1	22	57253	0
[	Ni	62	19.957	ug/L	0.411	2	29	7978	3
[	Cu	63	19.917	ug/L	0.856	4	58	125250	2
[	Cu	65	19.971	ug/L	0.412	2	28	57994	0
[	Zn	66	19.988	ug/L	0.667	3	143	34885	2
[	Zn	67	19.876	ug/L	0.492	2	23	5653	0
[	Zn	68	19.968	ug/L	1.162	5	137	24828	3
[	As	75	20.031	ug/L	0.164	0	267	31464	1
[	As-1	75	20.069	ug/L	0.097	0	8149	39286	1
[	Se	82	19.982	ug/L	0.385	1	-5	3481	0
[	Se	78	20.121	ug/L	0.349	1	8278	17074	1
[	Mo	98	19.896	ug/L	0.749	3	17	89370	2
	Y	89		ug/L			298590	308237	0
	Kr	83		ug/L			554	552	4
[>	In	115		ug/L			979916	989356	0
[	Ag	107	19.915	ug/L	0.503	2	15	290934	3
[	Cd	111	19.928	ug/L	0.229	1	63	98242	0
[	Cd	114	19.906	ug/L	0.159	0	30	243250	1
[	Sb	121	19.979	ug/L	0.171	0	102	307996	0
[	Sb	123	19.936	ug/L	0.116	0	72	232976	0
[	Ba	135	19.950	ug/L	0.042	0	11	84844	0
[	Ba	137	19.946	ug/L	0.275	1	17	144984	0
[>	Tb	159		ug/L			1160798	1165022	1
[	Tl	205	19.967	ug/L	0.432	2	51	699768	0
[	Pb	208	19.896	ug/L	0.367	1	139	918823	0
[	Bi	209		ug/L			2367270	2348870	0
[	Th	232	20.016	ug/L	0.421	2	21	879029	1
[	U	238	19.921	ug/L	0.270	1	3	901701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	696747 ✓	0
[	Be	9	49.897	ug/L	0.686	1	5	111740	1
	C	13		ug/L			58801	54239	1
	Cl	37		ug/L			3025336	3163386	3
[>	Sc	45		ug/L			671354	669550 ✓	1
[	V	51	49.953	ug/L	0.938	1	5156	690266	1
[	V-1	51	49.924	ug/L	1.117	2	130	689391	1
[	Cr	52	49.941	ug/L	0.626	1	15247	604281	1
[	Cr	53	49.846	ug/L	1.163	2	115	68004	1
[	Mn	55	50.060	ug/L	0.708	1	250	829657	1
[	Co	59	49.981	ug/L	1.468	2	40	645933	1
[>	Ge	72		ug/L			457613	451350 ✓	2
[	Ni	60	49.978	ug/L	0.690	1	22	138232	1
[	Ni	62	50.065	ug/L	1.302	2	29	19572	1
[	Cu	63	50.245	ug/L	0.142	0	58	315663	2
[	Cu	65	50.084	ug/L	1.326	2	28	142830	0
[	Zn	66	49.801	ug/L	0.242	0	143	82900	2
[	Zn	67	49.945	ug/L	2.045	4	23	13735	4
[	Zn	68	50.018	ug/L	0.646	1	137	60532	1
[	As	75	50.171	ug/L	0.732	1	267	77698	0
[	As-1	75	50.217	ug/L	1.030	2	8149	85364	0
[	Se	82	50.031	ug/L	0.981	1	-5	8527	0
[	Se	78	50.209	ug/L	1.763	3	8278	29743	0
[	Mo	98	50.165	ug/L	1.652	3	17	223173	1
	Y	89		ug/L			298590	300790	2
	Kr	83		ug/L			554	563	5
[>	In	115		ug/L			979916	968693 ✓	1
[	Ag	107	49.690	ug/L	0.746	1	15	689235	0
[	Cd	111	49.942	ug/L	0.972	1	63	239540	0
[	Cd	114	49.889	ug/L	0.348	0	30	590254	0
[	Sb	121	49.991	ug/L	0.730	1	102	753665	0
[	Sb	123	49.934	ug/L	0.921	1	72	567409	1
[	Ba	135	50.037	ug/L	0.678	1	11	209096	0
[	Ba	137	50.124	ug/L	0.813	1	17	361169	0
[>	Tb	159		ug/L			1160798	1161518 ✓	0
[	Tl	205	49.835	ug/L	0.270	0	51	1713158	0
[	Pb	208	49.789	ug/L	0.286	0	139	2245124	0
[	Bi	209		ug/L			2367270	2294195	0
[	Th	232	49.756	ug/L	0.366	0	21	2126922	0
[	U	238	49.645	ug/L	0.102	0	3	2163987	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:22:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	687365	3
[	Be	9	98.884	ug/L	2.897	2	5	210487	0
	C	13		ug/L			58801	57400	3
	Cl	37		ug/L			3025336	3210120	1
[>	Sc	45		ug/L			671354	654119	1
[	V	51	100.575	ug/L	3.378	3	5156	1378884	2
[	V-1	51	100.357	ug/L	3.857	3	130	1369972	2
[	Cr	52	100.804	ug/L	0.438	0	15247	1208550	1
[	Cr	53	100.092	ug/L	1.590	1	115	133715	0
[	Mn	55	100.259	ug/L	0.882	0	250	1637308	1
[	Co	59	100.111	ug/L	2.851	2	40	1268759	1
[>	Ge	72		ug/L			457613	455029	0
[	Ni	60	99.662	ug/L	1.501	1	22	274842	1
[	Ni	62	99.528	ug/L	1.748	1	29	38602	1
[	Cu	63	99.316	ug/L	1.591	1	58	614945	1
[	Cu	65	99.163	ug/L	0.649	0	28	277436	0
[	Zn	66	99.507	ug/L	1.250	1	143	164160	0
[	Zn	67	99.083	ug/L	1.389	1	23	26643	1
[	Zn	68	99.192	ug/L	1.199	1	137	117753	1
[	As	75	99.617	ug/L	0.859	0	267	153343	0
[	As-1	75	99.658	ug/L	0.850	0	8149	161104	0
[	Se	82	99.163	ug/L	0.830	0	-5	16586	0
[	Se	78	99.322	ug/L	0.696	0	8278	50334	0
[	Mo	98	99.526	ug/L	0.646	0	17	439613	0
	Y	89		ug/L			298590	300499	0
	Kr	83		ug/L			554	599	2
[>	In	115		ug/L			979916	944524	0
[	Ag	107	99.198	ug/L	2.226	2	15	1306740	1
[	Cd	111	99.485	ug/L	1.704	1	63	457400	1
[	Cd	114	99.730	ug/L	1.497	1	30	1140177	0
[	Sb	121	99.787	ug/L	0.890	0	102	1456513	0
[	Sb	123	100.284	ug/L	0.778	0	72	1121824	1
[	Ba	135	100.151	ug/L	0.666	0	11	410163	1
[	Ba	137	100.195	ug/L	1.139	1	17	708572	0
[>	Tb	159		ug/L			1160798	1140586	0
[	Tl	205	99.199	ug/L	0.492	0	51	3261597	0
[	Pb	208	99.379	ug/L	0.874	0	139	4311163	0
[	Bi	209		ug/L			2367270	2201217	0
[	Th	232	99.564	ug/L	1.210	1	21	4119387	0
[	U	238	99.488	ug/L	0.549	0	3	4186821	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:29:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	697054	2
[	Be	9	0.004	ug/L	0.003	64	5	14	37
	C	13		ug/L			58801	54932	2
	Cl	37		ug/L			3025336	3115327	1
[>	Sc	45		ug/L			671354	652960	2
[	V	51	0.033	ug/L	0.012	36	5156	5458	1
[	V-1	51	0.012	ug/L	0.005	38	130	294	19
[	Cr	52	0.099	ug/L	0.033	33	15247	15991	0
[	Cr	53	0.032	ug/L	0.009	27	115	155	5
[	Mn	55	0.007	ug/L	0.005	72	250	350	20
[	Co	59	0.004	ug/L	0.004	106	40	85	56
[>	Ge	72		ug/L			457613	460060	0
[	Ni	60	0.003	ug/L	0.006	196	22	31	51
[	Ni	62	0.105	ug/L	0.039	36	29	71	21
[	Cu	63	0.009	ug/L	0.004	44	58	116	22
[	Cu	65	0.003	ug/L	0.003	113	28	37	25
[	Zn	66	-0.011	ug/L	0.007	63	143	126	9
[	Zn	67	0.013	ug/L	0.024	184	23	27	23
[	Zn	68	-0.001	ug/L	0.004	252	137	136	3
[	As	75	0.004	ug/L	0.012	319	267	275	6
[	As-1	75	0.156	ug/L	0.030	19	8149	8435	0
[	Se	82	0.079	ug/L	0.042	52	-5	8	87
[	Se	78	0.569	ug/L	0.090	15	8278	8567	0
[	Mo	98	0.029	ug/L	0.008	27	17	145	24
	Y	89		ug/L			298590	298582	0
	Kr	83		ug/L			554	524	4
[>	In	115		ug/L			979916	957945	0
[	Ag	107	0.007	ug/L	0.005	67	15	104	58
[	Cd	111	0.009	ug/L	0.005	52	63	104	21
[	Cd	114	0.004	ug/L	0.003	69	30	77	43
[	Sb	121	0.111	ug/L	0.008	7	102	1736	7
[	Sb	123	0.115	ug/L	0.007	5	72	1374	5
[	Ba	135	0.004	ug/L	0.004	105	11	26	59
[	Ba	137	0.004	ug/L	0.006	124	17	48	81
[>	Tb	159		ug/L			1160798	1096676	2
[	Tl	205	0.022	ug/L	0.003	12	51	732	9
[	Pb	208	0.006	ug/L	0.008	124	139	390	81
[	Bi	209		ug/L			2367270	2301499	1
[	Th	232	0.136	ug/L	0.032	23	21	5414	22
[	U	238	0.007	ug/L	0.006	93	3	270	90

Sample Information

Sample Date/Time: Thursday, November 15, 2012 12:29:30
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9998**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.021	0.20	10	20	50	100
V-1	51	**1.0000**	0.021	0.20	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Co	59	**1.0000**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.010	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.029	0.20	10	20	50	100
Pb	208	**0.9999**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.036	0.20	10	20	50	100
U	238	**0.9999**	0.037	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICV~~ 222222
Sample Dil Factor: 11.15.12 MJJ
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:37:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			0	690107	0
[	Be	9	53.146	ug/L	0.766	1	0	113655	2
	C	13		ug/L			0	58734	1
	Cl	37		ug/L			0	3218935	3
[>	Sc	45		ug/L			0	672341	1
[	V	51	51.135	ug/L	1.411	2	0	718001	1
[	V-1	51	51.269	ug/L	1.224	2	0	719375	1
[	Cr	52	51.116	ug/L	1.808	3	0	621996	2
[	Cr	53	51.554	ug/L	1.461	2	0	70724	1
[	Mn	55	50.623	ug/L	0.324	0	0	849591	0
[	Co	59	50.494	ug/L	1.283	2	0	657818	2
[>	Ge	72		ug/L			0	469528	2
[	Ni	60	51.045	ug/L	1.012	1	0	145194	1
[	Ni	62	50.392	ug/L	0.923	1	0	20146	1
[	Cu	63	50.431	ug/L	1.704	3	0	322032	2
[	Cu	65	51.674	ug/L	1.650	3	0	149088	1
[	Zn	66	49.950	ug/L	1.747	3	0	84910	1
[	Zn	67	51.040	ug/L	2.180	4	0	14137	1
[	Zn	68	49.942	ug/L	0.951	1	0	61094	2
[	As	75	49.536	ug/L	0.730	1	0	78525	1
[	As-1	75	54.687	ug/L	0.896	1	0	86610	1
[	Se	82	77.809	ug/L	2.086	2	0	13427	0
[	Se	78	97.432	ug/L	2.602	2	0	42596	0
[	Mo	98	47.414	ug/L	1.368	2	0	216012	1
	Y	89		ug/L			0	303652	0
	Kr	83		ug/L			0	553	2
[>	In	115		ug/L			0	972119	1
[	Ag	107	49.472	ug/L	0.758	1	0	670726	1
[	Cd	111	49.450	ug/L	0.135	0	0	233986	1
[	Cd	114	49.954	ug/L	0.778	1	0	587773	1
[	Sb	121	49.688	ug/L	0.336	0	0	746416	1
[	Sb	123	49.378	ug/L	1.080	2	0	568383	1
[	Ba	135	50.653	ug/L	0.778	1	0	213478	0
[	Ba	137	50.086	ug/L	0.201	0	0	364553	0
[>	Tb	159		ug/L			0	1145568	0
[	Tl	205	52.835	ug/L	0.080	0	0	1744757	0
[	Pb	208	52.193	ug/L	0.627	1	0	2273959	0
[	Bi	209		ug/L			0	2233958	1
[	Th	232	52.401	ug/L	0.533	1	0	2177561	0
[	U	238	53.356	ug/L	0.280	0	0	2255260	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:45:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679842	0
	Be	9	52.033	ug/L	0.897	1	5	109609	1
	C	13		ug/L			58801	58588	3
	Cl	37		ug/L			3025336	3137156	1
>	Sc	45		ug/L			671354	663548	1
	V	51	50.369	ug/L	1.559	3	5156	703055	2
	V-1	51	51.026	ug/L	1.308	2	130	706690	1
	Cr	52	49.148	ug/L	1.798	3	15247	605277	2
	Cr	53	51.294	ug/L	1.325	2	115	69558	1
	Mn	55	49.800	ug/L	1.636	3	250	824882	1
	Co	59	50.757	ug/L	1.909	3	40	652468	2
>	Ge	72		ug/L			457613	473522	2
	Ni	60	49.094	ug/L	1.705	3	22	140845	3
	Ni	62	49.307	ug/L	0.997	2	29	19910	1
	Cu	63	49.414	ug/L	1.923	3	58	318202	1
	Cu	65	49.824	ug/L	1.135	2	28	145015	0
	Zn	66	49.078	ug/L	2.006	4	143	84273	1
	Zn	67	49.714	ug/L	2.289	4	23	13910	1
	Zn	68	48.338	ug/L	1.365	2	137	59753	0
	As	75	49.141	ug/L	2.527	5	267	78784	2
	As-1	75	49.011	ug/L	2.500	5	8149	86664	2
	Se	82	76.836	ug/L	3.394	4	-5	13361	1
	Se	78	76.378	ug/L	3.306	4	8278	42232	1
	Mo	98	46.387	ug/L	2.488	5	17	213021	2
	Y	89		ug/L			298590	300868	2
	Kr	83		ug/L			554	563	4
>	In	115		ug/L			979916	953436	0
	Ag	107	48.913	ug/L	0.733	1	15	650479	2
	Cd	111	49.593	ug/L	0.101	0	63	230208	0
	Cd	114	49.704	ug/L	0.452	0	30	573631	0
	Sb	121	49.579	ug/L	0.247	0	102	730567	1
	Sb	123	49.446	ug/L	0.673	1	72	558346	1
	Ba	135	50.215	ug/L	0.617	1	11	207610	2
	Ba	137	50.215	ug/L	0.489	0	17	358504	1
>	Tb	159		ug/L			1160798	1132838	0
	Tl	205	52.259	ug/L	0.886	1	51	1706490	1
	Pb	208	51.235	ug/L	0.802	1	139	2207482	0
	Bi	209		ug/L			2367270	2236728	0
	Th	232	51.732	ug/L	1.328	2	21	2125707	1
	U	238	52.606	ug/L	1.153	2	3	2198678	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669243	2
	Be	9	0.004	ug/L	0.004	115	5	13	66
	C	13		ug/L			58801	54183	1
	Cl	37		ug/L			3025336	3033736	1
>	Sc	45		ug/L			671354	641399	1
	V	51	0.023	ug/L	0.011	47	5156	5231	2
	V-1	51	0.006	ug/L	0.003	43	130	205	15
	Cr	52	0.079	ug/L	0.025	32	15247	15481	0
	Cr	53	0.024	ug/L	0.013	53	115	142	10
	Mn	55	0.004	ug/L	0.003	60	250	307	11
	Co	59	0.002	ug/L	0.002	92	40	59	32
>	Ge	72		ug/L			457613	463989	2
	Ni	60	-0.000	ug/L	0.002	32711	22	23	23
	Ni	62	0.122	ug/L	0.014	11	29	78	5
	Cu	63	0.010	ug/L	0.004	46	58	119	22
	Cu	65	-0.001	ug/L	0.001	94	28	25	9
	Zn	66	-0.004	ug/L	0.003	63	143	137	2
	Zn	67	-0.009	ug/L	0.008	92	23	21	11
	Zn	68	-0.002	ug/L	0.005	240	137	136	4
	As	75	-0.008	ug/L	0.038	451	267	257	20
	As-1	75	0.092	ug/L	0.158	173	8149	8401	0
	Se	82	-0.008	ug/L	0.105	1266	-5	-7	252
	Se	78	0.354	ug/L	0.540	152	8278	8543	0
	Mo	98	0.012	ug/L	0.001	11	17	69	9
	Y	89		ug/L			298590	293125	0
	Kr	83		ug/L			554	562	1
>	In	115		ug/L			979916	951777	1
	Ag	107	0.002	ug/L	0.001	39	15	41	26
	Cd	111	0.003	ug/L	0.001	21	63	76	2
	Cd	114	0.001	ug/L	0.002	109	30	46	40
	Sb	121	0.027	ug/L	0.006	23	102	491	17
	Sb	123	0.029	ug/L	0.006	19	72	393	15
	Ba	135	0.004	ug/L	0.009	200	11	29	122
	Ba	137	0.004	ug/L	0.007	167	17	47	109
>	Tb	159		ug/L			1160798	1078092	1
	Tl	205	0.009	ug/L	0.007	76	51	314	62
	Pb	208	0.005	ug/L	0.007	138	139	324	82
	Bi	209		ug/L			2367270	2257219	0
	Th	232	0.067	ug/L	0.010	14	21	2631	12
	U	238	0.004	ug/L	0.004	88	3	165	84

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:58:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672643	1
	Be	9	51.640	ug/L	1.204	2	5	107647	3
	C	13		ug/L			58801	54915	2
	Cl	37		ug/L			3025336	3145302	2
>	Sc	45		ug/L			671354	649221	1
	V	51	49.830	ug/L	0.563	1	5156	680651	0
	V-1	51	50.212	ug/L	0.923	1	130	680465	1
	Cr	52	50.260	ug/L	1.406	2	15247	605352	2
	Cr	53	51.510	ug/L	1.619	3	115	68345	2
	Mn	55	50.304	ug/L	0.454	0	250	815413	0
	Co	59	51.786	ug/L	0.231	0	40	651516	1
>	Ge	72		ug/L			457613	459939	1
	Ni	60	50.470	ug/L	1.372	2	22	140653	1
	Ni	62	49.846	ug/L	0.648	1	29	19555	0
	Cu	63	51.230	ug/L	2.106	4	58	320542	2
	Cu	65	51.245	ug/L	1.016	1	28	144908	0
	Zn	66	49.705	ug/L	1.726	3	143	82938	2
	Zn	67	51.199	ug/L	1.131	2	23	13926	2
	Zn	68	51.268	ug/L	0.740	1	137	61576	0
	As	75	49.582	ug/L	1.100	2	267	77269	1
	As-1	75	50.018	ug/L	0.989	1	8149	85799	1
	Se	82	49.834	ug/L	1.549	3	-5	8420	1
	Se	78	51.372	ug/L	1.242	2	8278	30327	0
	Mo	98	48.399	ug/L	0.835	1	17	216091	2
	Y	89		ug/L			298590	298621	0
	Kr	83		ug/L			554	557	5
>	In	115		ug/L			979916	938906	1
	Ag	107	47.685	ug/L	0.692	1	15	624431	1
	Cd	111	50.910	ug/L	0.097	0	63	232717	1
	Cd	114	50.700	ug/L	1.020	2	30	576141	1
	Sb	121	50.246	ug/L	0.821	1	102	728986	0
	Sb	123	49.941	ug/L	1.037	2	72	555258	1
	Ba	135	50.622	ug/L	1.064	2	11	206045	0
	Ba	137	50.218	ug/L	1.309	2	17	352955	1
>	Tb	159		ug/L			1160798	1111509	1
	Tl	205	51.733	ug/L	0.826	1	51	1657421	0
	Pb	208	51.292	ug/L	0.795	1	139	2168210	0
	Bi	209		ug/L			2367270	2215073	0
	Th	232	50.837	ug/L	0.534	1	21	2049675	0
	U	238	52.131	ug/L	1.387	2	3	2137564	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:05:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	673300 ✓	0
	Be	9	0.002	ug/L	0.001	33	5	8	13
	C	13		ug/L			58801	56331	3
	Cl	37		ug/L			3025336	3054027	1
>	Sc	45		ug/L			671354	643550 ✓	1
	V	51	0.024	ug/L	0.008	32	5156	5265	2
	V-1	51	0.002	ug/L	0.001	56	130	158	13
	Cr	52	0.080	ug/L	0.037	46	15247	15550	3
	Cr	53	0.010	ug/L	0.012	122	115	124	13
	Mn	55	0.003	ug/L	0.002	54	250	285	10
	Co	59	0.001	ug/L	0.000	56	40	46	10
>	Ge	72		ug/L			457613	454935 ✓	1
	Ni	60	0.004	ug/L	0.007	182	22	33	60
	Ni	62	0.143	ug/L	0.038	26	29	85	18
	Cu	63	0.009	ug/L	0.001	8	58	113	5
	Cu	65	0.001	ug/L	0.004	298	28	32	36
	Zn	66	-0.010	ug/L	0.008	80	143	125	9
	Zn	67	-0.004	ug/L	0.013	290	23	22	15
	Zn	68	-0.006	ug/L	0.005	84	137	129	2
	As	75	-0.012	ug/L	0.007	57	267	248	5
	As-1	75	0.278	ug/L	0.134	48	8149	8526	1
	Se	82	-0.055	ug/L	0.059	107	-5	-14	67
	Se	78	1.018	ug/L	0.490	48	8278	8659	1
	Mo	98	0.016	ug/L	0.002	14	17	86	11
	Y	89		ug/L			298590	293139	1
	Kr	83		ug/L			554	565	5
>	In	115		ug/L			979916	934887 ✓	0
	Ag	107	0.002	ug/L	0.001	30	15	45	20
	Cd	111	0.005	ug/L	0.003	61	63	81	16
	Cd	114	0.002	ug/L	0.001	61	30	51	26
	Sb	121	0.067	ug/L	0.006	8	102	1068	8
	Sb	123	0.066	ug/L	0.007	10	72	796	9
	Ba	135	0.002	ug/L	0.001	27	11	21	12
	Ba	137	0.001	ug/L	0.001	156	17	22	42
>	Tb	159		ug/L			1160798	1068831 ✓	0
	Tl	205	0.006	ug/L	0.002	28	51	218	22
	Pb	208	0.001	ug/L	0.001	81	139	162	16
	Bi	209		ug/L			2367270	2233301	1
	Th	232	0.113	ug/L	0.016	13	21	4384	13
	U	238	0.002	ug/L	0.000	21	3	80	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:09:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	664724	1
	Be	9	0.218	ug/L	0.013	6	5	453	5
	C	13		ug/L			58801	56361	3
	Cl	37		ug/L			3025336	2995308	2
>	Sc	45		ug/L			671354	647077	3
	V	51	0.232	ug/L	0.023	9	5156	8106	1
	V-1	51	0.208	ug/L	0.013	6	130	2938	3
	Cr	52	0.610	ug/L	0.062	10	15247	21826	0
	Cr	53	0.532	ug/L	0.023	4	115	813	0
	Mn	55	0.520	ug/L	0.023	4	250	8637	2
	Co	59	0.214	ug/L	0.013	6	40	2718	3
>	Ge	72		ug/L			457613	451418	1
	Ni	60	0.520	ug/L	0.014	2	22	1445	1
	Ni	62	0.662	ug/L	0.059	8	29	283	7
	Cu	63	0.541	ug/L	0.007	1	58	3380	2
	Cu	65	0.550	ug/L	0.030	5	28	1553	6
	Zn	66	4.418	ug/L	0.132	2	143	7364	2
	Zn	67	4.073	ug/L	0.109	2	23	1108	1
	Zn	68	4.349	ug/L	0.026	0	137	5250	1
	As	75	0.190	ug/L	0.018	9	267	553	5
	As-1	75	0.540	ug/L	0.025	4	8149	8861	1
	Se	82	0.584	ug/L	0.048	8	-5	91	9
	Se	78	1.794	ug/L	0.117	6	8278	8920	1
	Mo	98	0.193	ug/L	0.006	3	17	863	3
	Y	89		ug/L			298590	296537	0
	Kr	83		ug/L			554	517	1
>	In	115		ug/L			979916	943085	1
	Ag	107	0.202	ug/L	0.005	2	15	2676	1
	Cd	111	0.115	ug/L	0.009	7	63	588	6
	Cd	114	0.107	ug/L	0.005	4	30	1252	5
	Sb	121	0.213	ug/L	0.007	3	102	3206	2
	Sb	123	0.215	ug/L	0.003	1	72	2471	0
	Ba	135	0.511	ug/L	0.022	4	11	2099	3
	Ba	137	0.493	ug/L	0.006	1	17	3497	1
>	Tb	159		ug/L			1160798	1071843	1
	Tl	205	0.222	ug/L	0.004	1	51	6896	0
	Pb	208	0.116	ug/L	0.004	3	139	4848	1
	Bi	209		ug/L			2367270	2241773	0
	Th	232	0.260	ug/L	0.007	2	21	10131	1
	U	238	0.219	ug/L	0.005	2	3	8666	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:13:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	657521	1
[	Be	9	0.000	ug/L	0.001	971	5	5	39
	C	13		ug/L			58801	113952	2
	Cl	37		ug/L			3025336	8335589	2
[>	Sc	45		ug/L			671354	664054	2
[	V	51	0.068	ug/L	0.032	47	5156	6048	8
[	V-1	51	1.416	ug/L	0.043	3	130	19751	0
[	Cr	52	0.596	ug/L	0.030	5	15247	22239	1
[	Cr	53	5.006	ug/L	0.187	3	115	6895	1
[	Mn	55	0.047	ug/L	0.004	7	250	1033	3
[	Co	59	0.021	ug/L	0.001	3	40	307	1
[>	Ge	72		ug/L			457613	442144	1
[	Ni	60	0.343	ug/L	0.014	4	22	941	3
[	Ni	62	2.875	ug/L	0.551	19	29	1109	17
[	Cu	63	0.946	ug/L	0.047	4	58	5742	3
[	Cu	65	0.305	ug/L	0.024	8	28	855	6
[	Zn	66	0.896	ug/L	0.009	1	143	1572	0
[	Zn	67	6.568	ug/L	0.015	0	23	1737	1
[	Zn	68	0.398	ug/L	0.021	5	137	590	2
[	As	75	0.049	ug/L	0.058	119	267	331	25
[	As-1	75	0.468	ug/L	0.102	21	8149	8570	0
[	Se	82	-0.219	ug/L	0.106	48	-5	-41	43
[	Se	78	1.645	ug/L	0.274	16	8278	8675	0
[	Mo	98	417.302	ug/L	10.636	2	17	1790660	1
	Y	89		ug/L			298590	294224	1
	Kr	83		ug/L			554	719	5
[>	In	115		ug/L			979916	944291	1
[	Ag	107	0.026	ug/L	0.002	7	15	350	6
[	Cd	111	0.113	ug/L	0.014	12	63	580	11
[	Cd	114	0.266	ug/L	0.002	0	30	3070	0
[	Sb	121	0.070	ug/L	0.003	4	102	1126	4
[	Sb	123	0.073	ug/L	0.003	4	72	883	5
[	Ba	135	0.051	ug/L	0.003	6	11	219	6
[	Ba	137	0.041	ug/L	0.002	5	17	309	5
[>	Tb	159		ug/L			1160798	1158938	1
[	Tl	205	0.036	ug/L	0.001	2	51	1249	2
[	Pb	208	0.031	ug/L	0.001	3	139	1493	3
[	Bi	209		ug/L			2367270	2140693	0
[	Th	232	0.234	ug/L	0.129	55	21	9824	53
[	U	238	0.002	ug/L	0.000	18	3	70	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:19:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	650871	1
[	Be	9	0.001	ug/L	0.001	167	5	6	32
	C	13		ug/L			58801	113109	1
	Cl	37		ug/L			3025336	8133764	2
[>	Sc	45		ug/L			671354	649064	1
[	V	51	0.067	ug/L	0.164	243	5156	5874	36
[	V-1	51	1.481	ug/L	0.048	3	130	20184	1
[	Cr	52	20.105	ug/L	0.697	3	15247	250901	1
[	Cr	53	24.778	ug/L	0.349	1	115	32928	0
[	Mn	55	19.515	ug/L	0.173	0	250	316411	0
[	Co	59	19.846	ug/L	0.342	1	40	249666	2
[>	Ge	72		ug/L			457613	434992	1
[	Ni	60	20.342	ug/L	0.279	1	22	53640	1
[	Ni	62	23.807	ug/L	0.494	2	29	8848	1
[	Cu	63	20.600	ug/L	0.126	0	58	121985	1
[	Cu	65	20.475	ug/L	0.552	2	28	54772	1
[	Zn	66	20.028	ug/L	0.288	1	143	31692	0
[	Zn	67	24.416	ug/L	0.108	0	23	6293	0
[	Zn	68	18.434	ug/L	0.234	1	137	21023	0
[	As	75	19.377	ug/L	0.169	0	267	28716	0
[	As-1	75	19.980	ug/L	0.202	1	8149	37068	0
[	Se	82	-0.204	ug/L	0.108	52	-5	-37	46
[	Se	78	2.215	ug/L	0.164	7	8278	8766	0
[	Mo	98	420.975	ug/L	13.426	3	17	1777102	1
	Y	89		ug/L			298590	291174	0
	Kr	83		ug/L			554	682	6
[>	In	115		ug/L			979916	947542	1
[	Ag	107	20.273	ug/L	0.411	2	15	267896	1
[	Cd	111	19.776	ug/L	0.253	1	63	91272	1
[	Cd	114	19.879	ug/L	0.241	1	30	228016	0
[	Sb	121	0.069	ug/L	0.004	5	102	1115	4
[	Sb	123	0.071	ug/L	0.002	2	72	869	1
[	Ba	135	0.050	ug/L	0.000	0	11	217	1
[	Ba	137	0.045	ug/L	0.002	3	17	334	3
[>	Tb	159		ug/L			1160798	1159475	1
[	Tl	205	0.033	ug/L	0.003	8	51	1142	6
[	Pb	208	0.033	ug/L	0.000	1	139	1588	0
[	Bi	209		ug/L			2367270	2159771	0
[	Th	232	0.072	ug/L	0.019	26	21	3041	26
[	U	238	0.000	ug/L	0.000	12	3	23	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:26:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	609319	1
[	Be	9	206.077	ug/L	3.482	1	5	389040	1
	C	13		ug/L			58801	55833	0
	Cl	37		ug/L			3025336	3189014	2
[>	Sc	45		ug/L			671354	602641	1
|	V	51	195.948	ug/L	7.680	3	5156	2470524	2
|	V-1	51	199.129	ug/L	7.737	3	130	2504225	2
|	Cr	52	195.961	ug/L	4.733	2	15247	2151167	1
|	Cr	53	206.364	ug/L	5.092	2	115	253859	1
|	Mn	55	195.404	ug/L	3.233	1	250	2939491	1
[	Co	59	200.405	ug/L	6.381	3	40	2339954	2
[>	Ge	72		ug/L			457613	425535	0
|	Ni	60	198.985	ug/L	2.180	1	22	513113	0
|	Ni	62	198.880	ug/L	1.683	0	29	72115	1
|	Cu	63	200.571	ug/L	1.648	0	58	1161356	0
|	Cu	65	199.425	ug/L	4.286	2	28	521708	1
|	Zn	66	194.570	ug/L	5.667	2	143	300077	3
|	Zn	67	199.674	ug/L	5.517	2	23	50182	2
|	Zn	68	191.986	ug/L	2.160	1	137	213004	0
|	As	75	197.213	ug/L	2.875	1	267	283637	0
|	As-1	75	197.476	ug/L	2.860	1	8149	291090	0
|	Se	82	194.359	ug/L	2.528	1	-5	30405	0
|	Se	78	195.440	ug/L	2.980	1	8278	85172	1
[	Mo	98	202.854	ug/L	4.196	2	17	837990	2
	Y	89		ug/L			298590	282070	2
	Kr	83		ug/L			554	661	0
[>	In	115		ug/L			979916	910337	2
|	Ag	107	185.645	ug/L	3.522	1	15	2356522	0
|	Cd	111	197.211	ug/L	2.645	1	63	873743	0
|	Cd	114	192.799	ug/L	3.502	1	30	2124127	1
|	Sb	121	196.719	ug/L	3.933	1	102	2766689	0
|	Sb	123	197.492	ug/L	4.290	2	72	2128579	0
|	Ba	135	207.938	ug/L	4.721	2	11	820519	0
[	Ba	137	207.000	ug/L	4.826	2	17	1410525	0
[>	Tb	159		ug/L			1160798	1104780	0
|	Tl	205	197.430	ug/L	1.709	0	51	6287827	1
|	Pb	208	196.838	ug/L	1.394	0	139	8270727	0
|	Bi	209		ug/L			2367270	2090096	1
|	Th	232	201.470	ug/L	1.463	0	21	8074015	0
[	U	238	201.287	ug/L	3.374	1	3	8204463	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:33:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	577075	2
	Be	9	306.409	ug/L	13.494	4	5	547527	2
	C	13		ug/L			58801	55076	2
	Cl	37		ug/L			3025336	3162904	4
>	Sc	45		ug/L			671354	612226	1
	V	51	283.797	ug/L	9.660	3	5156	3632748	1
	V-1	51	289.290	ug/L	8.982	3	130	3695831	1
	Cr	52	282.229	ug/L	7.460	2	15247	3141339	1
	Cr	53	300.191	ug/L	3.095	1	115	375145	0
	Mn	55	281.724	ug/L	4.653	1	250	4305097	0
	Co	59	293.242	ug/L	0.943	0	40	3478953	1
>	Ge	72		ug/L			457613	422819	1
	Ni	60	290.818	ug/L	8.256	2	22	745163	3
	Ni	62	299.097	ug/L	5.548	1	29	107725	0
	Cu	63	291.362	ug/L	2.585	0	58	1676304	1
	Cu	65	293.934	ug/L	6.524	2	28	763966	1
	Zn	66	282.337	ug/L	7.145	2	143	432483	1
	Zn	67	289.816	ug/L	6.451	2	23	72355	0
	Zn	68	280.385	ug/L	0.872	0	137	309043	1
	As	75	292.245	ug/L	0.429	0	267	417538	1
	As-1	75	294.389	ug/L	2.060	0	8149	427505	1
	Se	82	278.441	ug/L	5.430	1	-5	43279	1
	Se	78	286.376	ug/L	5.724	1	8278	120435	1
	Mo	98	288.631	ug/L	5.818	2	17	1184544	1
	Y	89		ug/L			298590	273325	1
	Kr	83		ug/L			554	740	5
>	In	115		ug/L			979916	863682	0
	Ag	107	257.877	ug/L	12.200	4	15	3106982	5
	Cd	111	292.348	ug/L	4.398	1	63	1229105	2
	Cd	114	287.278	ug/L	3.540	1	30	3003373	1
	Sb	121	294.235	ug/L	2.356	0	102	3927140	1
	Sb	123	293.233	ug/L	2.550	0	72	2999273	0
	Ba	135	317.752	ug/L	2.211	0	11	1189941	1
	Ba	137	309.519	ug/L	2.815	0	17	2001559	0
>	Tb	159		ug/L			1160798	1089373	0
	Tl	205	292.709	ug/L	4.715	1	51	9191409	1
	Pb	208	286.234	ug/L	3.533	1	139	11858836	0
	Bi	209		ug/L			2367270	1988062	0
	Th	232	295.250	ug/L	3.596	1	21	11667334	0
	U	238	297.492	ug/L	3.924	1	3	11957127	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:40:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	615194	3
[	Be	9	0.003	ug/L	0.003	93	5	10	53
	C	13		ug/L			58801	54586	1
	Cl	37		ug/L			3025336	3096695	3
[>	Sc	45		ug/L			671354	611140	0
[	V	51	0.038	ug/L	0.010	26	5156	5184	2
[	V-1	51	0.012	ug/L	0.001	8	130	267	4
[	Cr	52	0.139	ug/L	0.031	22	15247	15413	1
[	Cr	53	0.051	ug/L	0.007	13	115	169	4
[	Mn	55	0.021	ug/L	0.001	4	250	546	2
[	Co	59	0.002	ug/L	0.000	21	40	63	8
[>	Ge	72		ug/L			457613	448126	0
[	Ni	60	0.022	ug/L	0.002	8	22	82	6
[	Ni	62	0.801	ug/L	0.094	11	29	334	10
[	Cu	63	0.067	ug/L	0.007	11	58	468	9
[	Cu	65	0.022	ug/L	0.003	14	28	87	9
[	Zn	66	1.043	ug/L	0.030	2	143	1833	2
[	Zn	67	1.049	ug/L	0.095	9	23	300	7
[	Zn	68	1.045	ug/L	0.024	2	137	1354	2
[	As	75	-0.008	ug/L	0.032	384	267	249	18
[	As-1	75	0.414	ug/L	0.077	18	8149	8605	0
[	Se	82	0.012	ug/L	0.040	335	-5	-3	197
[	Se	78	1.501	ug/L	0.228	15	8278	8733	0
[	Mo	98	0.053	ug/L	0.007	13	17	246	13
	Y	89		ug/L			298590	286909	2
	Kr	83		ug/L			554	524	4
[>	In	115		ug/L			979916	914244	1
[	Ag	107	0.007	ug/L	0.002	27	15	106	23
[	Cd	111	0.011	ug/L	0.002	19	63	109	7
[	Cd	114	0.005	ug/L	0.000	8	30	79	6
[	Sb	121	0.289	ug/L	0.028	9	102	4176	8
[	Sb	123	0.298	ug/L	0.027	8	72	3292	7
[	Ba	135	0.012	ug/L	0.002	19	11	58	14
[	Ba	137	0.011	ug/L	0.002	14	17	93	10
[>	Tb	159		ug/L			1160798	1059904	0
[	Tl	205	0.040	ug/L	0.014	35	51	1254	33
[	Pb	208	0.009	ug/L	0.001	6	139	506	5
[	Bi	209		ug/L			2367270	2213777	1
[	Th	232	0.176	ug/L	0.025	14	21	6781	14
[	U	238	0.005	ug/L	0.001	11	3	210	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:46:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619916	1
	Be	9	0.001	ug/L	0.003	301	5	6	82
	C	13		ug/L			58801	55312	1
	Cl	37		ug/L			3025336	3021845	2
>	Sc	45		ug/L			671354	605160	3
	V	51	0.032	ug/L	0.019	58	5156	5045	1
	V-1	51	0.009	ug/L	0.001	10	130	234	1
	Cr	52	0.117	ug/L	0.062	52	15247	15005	1
	Cr	53	0.043	ug/L	0.012	27	115	157	9
	Mn	55	0.030	ug/L	0.002	6	250	684	3
	Co	59	0.002	ug/L	0.002	94	40	63	41
>	Ge	72		ug/L			457613	442941	1
	Ni	60	0.031	ug/L	0.007	24	22	103	17
	Ni	62	0.557	ug/L	0.044	7	29	239	7
	Cu	63	0.049	ug/L	0.001	2	58	354	1
	Cu	65	0.017	ug/L	0.004	24	28	74	14
	Zn	66	1.371	ug/L	0.046	3	143	2337	3
	Zn	67	1.215	ug/L	0.068	5	23	340	6
	Zn	68	1.322	ug/L	0.028	2	137	1658	2
	As	75	-0.003	ug/L	0.014	478	267	255	8
	As-1	75	0.332	ug/L	0.124	37	8149	8382	1
	Se	82	-0.012	ug/L	0.037	300	-5	-7	83
	Se	78	1.186	ug/L	0.441	37	8278	8501	0
	Mo	98	0.017	ug/L	0.005	28	17	89	23
	Y	89		ug/L			298590	286549	0
	Kr	83		ug/L			554	531	1
>	In	115		ug/L			979916	917489	0
	Ag	107	0.003	ug/L	0.000	9	15	56	6
	Cd	111	0.006	ug/L	0.002	34	63	86	11
	Cd	114	0.002	ug/L	0.001	27	30	52	12
	Sb	121	0.084	ug/L	0.007	8	102	1281	7
	Sb	123	0.085	ug/L	0.012	14	72	985	12
	Ba	135	0.018	ug/L	0.002	11	11	81	9
	Ba	137	0.014	ug/L	0.002	17	17	115	13
>	Tb	159		ug/L			1160798	1062534	0
	Tl	205	0.022	ug/L	0.011	51	51	713	47
	Pb	208	0.010	ug/L	0.000	2	139	548	2
	Bi	209		ug/L			2367270	2213394	0
	Th	232	0.066	ug/L	0.003	4	21	2557	5
	U	238	0.002	ug/L	0.000	3	3	71	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:52:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641603	1
	Be	9	0.001	ug/L	0.002	129	5	7	45
	C	13		ug/L			58801	56930	4
	Cl	37		ug/L			3025336	3060608	1
>	Sc	45		ug/L			671354	611885	0
	V	51	0.030	ug/L	0.002	6	5156	5085	0
	V-1	51	0.006	ug/L	0.001	19	130	198	7
	Cr	52	0.112	ug/L	0.009	7	15247	15135	0
	Cr	53	0.034	ug/L	0.008	24	115	147	6
	Mn	55	0.013	ug/L	0.001	9	250	424	4
	Co	59	0.002	ug/L	0.000	14	40	61	5
>	Ge	72		ug/L			457613	449443	0
	Ni	60	0.024	ug/L	0.005	21	22	86	14
	Ni	62	0.436	ug/L	0.036	8	29	196	7
	Cu	63	0.037	ug/L	0.002	4	58	283	4
	Cu	65	0.011	ug/L	0.004	33	28	57	16
	Zn	66	0.740	ug/L	0.051	6	143	1344	5
	Zn	67	0.727	ug/L	0.042	5	23	216	5
	Zn	68	0.758	ug/L	0.024	3	137	1022	2
	As	75	0.012	ug/L	0.020	169	267	280	11
	As-1	75	0.213	ug/L	0.052	24	8149	8326	0
	Se	82	0.084	ug/L	0.042	50	-5	8	80
	Se	78	0.745	ug/L	0.238	31	8278	8442	0
	Mo	98	0.011	ug/L	0.003	31	17	63	23
	Y	89		ug/L			298590	284306	2
	Kr	83		ug/L			554	509	6
>	In	115		ug/L			979916	922948	1
	Ag	107	0.003	ug/L	0.002	60	15	55	44
	Cd	111	0.003	ug/L	0.003	121	63	71	19
	Cd	114	0.004	ug/L	0.002	68	30	68	39
	Sb	121	0.042	ug/L	0.005	11	102	696	9
	Sb	123	0.043	ug/L	0.005	11	72	535	9
	Ba	135	0.011	ug/L	0.004	41	11	53	32
	Ba	137	0.009	ug/L	0.000	2	17	81	2
>	Tb	159		ug/L			1160798	1075302	0
	Tl	205	0.014	ug/L	0.004	28	51	470	25
	Pb	208	0.008	ug/L	0.001	16	139	451	11
	Bi	209		ug/L			2367270	2229145	1
	Th	232	0.047	ug/L	0.007	15	21	1860	14
	U	238	0.001	ug/L	0.001	62	3	59	58

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:56:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	629463	1
[	Be	9	52.179	ug/L	2.220	4	5	101728	2
	C	13		ug/L			58801	52038	1
	Cl	37		ug/L			3025336	3115060	1
[>	Sc	45		ug/L			671354	629930	1
[	V	51	48.870	ug/L	0.634	1	5156	647808	0
[	V-1	51	48.942	ug/L	0.592	1	130	643582	0
[	Cr	52	49.933	ug/L	0.545	1	15247	583698	0
[	Cr	53	50.172	ug/L	0.410	0	115	64606	1
[	Mn	55	48.989	ug/L	1.592	3	250	770446	2
[	Co	59	50.515	ug/L	1.603	3	40	616810	4
[>	Ge	72		ug/L			457613	455134	0
[	Ni	60	48.271	ug/L	0.443	0	22	133154	1
[	Ni	62	48.036	ug/L	1.413	2	29	18649	2
[	Cu	63	49.005	ug/L	0.631	1	58	303515	0
[	Cu	65	49.250	ug/L	0.691	1	28	137826	0
[	Zn	66	49.059	ug/L	0.414	0	143	81025	0
[	Zn	67	51.214	ug/L	0.658	1	23	13786	1
[	Zn	68	49.331	ug/L	1.310	2	137	58639	2
[	As	75	48.124	ug/L	0.684	1	267	74227	0
[	As-1	75	48.456	ug/L	0.685	1	8149	82510	0
[	Se	82	48.316	ug/L	0.418	0	-5	8080	0
[	Se	78	49.379	ug/L	1.031	2	8278	29169	1
[	Mo	98	43.992	ug/L	0.468	1	17	194359	0
	Y	89		ug/L			298590	285118	1
	Kr	83		ug/L			554	497	1
[>	In	115		ug/L			979916	914653	1
[	Ag	107	45.825	ug/L	0.786	1	15	584636	2
[	Cd	111	51.074	ug/L	1.115	2	63	227403	1
[	Cd	114	50.255	ug/L	0.373	0	30	556416	1
[	Sb	121	50.817	ug/L	1.023	2	102	718236	0
[	Sb	123	50.401	ug/L	1.077	2	72	545938	1
[	Ba	135	50.858	ug/L	0.836	1	11	201681	0
[	Ba	137	50.512	ug/L	1.379	2	17	345881	1
[>	Tb	159		ug/L			1160798	1089830	0
[	Tl	205	51.441	ug/L	0.276	0	51	1616139	0
[	Pb	208	50.891	ug/L	0.418	0	139	2109517	0
[	Bi	209		ug/L			2367270	2186484	0
[	Th	232	51.048	ug/L	0.973	1	21	2018213	2
[	U	238	52.240	ug/L	0.016	0	3	2100659	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:03:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	619987 ✓	0
[	Be	9	0.000	ug/L	0.001	417	5	5	39
	C	13		ug/L			58801	52087	4
	Cl	37		ug/L			3025336	3065436	1
[>	Sc	45		ug/L			671354	613071 ✓	0
|	V	51	0.025	ug/L	0.016	65	5156	5026	3
|	V-1	51	0.003	ug/L	0.000	9	130	153	2
|	Cr	52	0.084	ug/L	0.048	56	15247	14853	2
|	Cr	53	0.011	ug/L	0.006	55	115	120	7
|	Mn	55	0.004	ug/L	0.001	15	250	296	4
[	Co	59	0.001	ug/L	0.001	101	40	45	19
[>	Ge	72		ug/L			457613	435471 ✓	0
|	Ni	60	0.000	ug/L	0.002	3944	22	21	22
|	Ni	62	0.389	ug/L	0.019	4	29	172	3
|	Cu	63	0.024	ug/L	0.001	3	58	197	3
|	Cu	65	-0.000	ug/L	0.002	1731	28	27	16
|	Zn	66	-0.005	ug/L	0.002	38	143	128	2
|	Zn	67	0.017	ug/L	0.024	136	23	27	23
|	Zn	68	0.006	ug/L	0.015	265	137	136	12
|	As	75	-0.001	ug/L	0.018	1417	267	253	10
|	As-1	75	0.366	ug/L	0.108	29	8149	8292	0
|	Se	82	0.000	ug/L	0.041	26221	-5	-5	128
|	Se	78	1.335	ug/L	0.417	31	8278	8418	1
[	Mo	98	0.017	ug/L	0.005	33	17	86	26
	Y	89		ug/L			298590	280176	1
	Kr	83		ug/L			554	531	8
[>	In	115		ug/L			979916	903574 ✓	1
|	Ag	107	0.002	ug/L	0.000	7	15	44	4
|	Cd	111	0.006	ug/L	0.003	48	63	85	14
|	Cd	114	0.002	ug/L	0.001	29	30	50	13
|	Sb	121	0.078	ug/L	0.008	10	102	1185	10
|	Sb	123	0.079	ug/L	0.011	13	72	913	13
|	Ba	135	0.000	ug/L	0.001	255	11	11	19
[	Ba	137	0.000	ug/L	0.000	64	17	18	11
[>	Tb	159		ug/L			1160798	1049952 ✓	0
|	Tl	205	0.009	ug/L	0.003	39	51	310	33
|	Pb	208	0.001	ug/L	0.000	14	139	174	3
|	Bi	209		ug/L			2367270	2199190	0
|	Th	232	0.105	ug/L	0.016	15	21	4015	15
[	U	238	0.002	ug/L	0.000	12	3	72	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	634669	1
	Be	9	0.001	ug/L	0.001	52	5	7	19
	C	13		ug/L			58801	57096	0
	Cl	37		ug/L			3025336	3080979	1
>	Sc	45		ug/L			671354	621749	0
	V	51	0.041	ug/L	0.015	36	5156	5306	3
	V-1	51	0.002	ug/L	0.001	47	130	143	7
	Cr	52	0.126	ug/L	0.042	32	15247	15544	3
	Cr	53	-0.001	ug/L	0.007	509	115	105	8
	Mn	55	0.017	ug/L	0.001	4	250	490	2
	Co	59	0.001	ug/L	0.000	22	40	49	5
>	Ge	72		ug/L			457613	448808	2
	Ni	60	0.003	ug/L	0.005	202	22	29	47
	Ni	62	0.350	ug/L	0.037	10	29	162	6
	Cu	63	0.032	ug/L	0.004	11	58	254	7
	Cu	65	0.016	ug/L	0.001	7	28	71	4
	Zn	66	0.149	ug/L	0.008	5	143	382	5
	Zn	67	0.161	ug/L	0.039	24	23	66	18
	Zn	68	0.168	ug/L	0.017	10	137	330	4
	As	75	-0.026	ug/L	0.024	92	267	223	13
	As-1	75	0.282	ug/L	0.081	28	8149	8416	1
	Se	82	-0.048	ug/L	0.035	71	-5	-13	45
	Se	78	1.038	ug/L	0.267	25	8278	8551	1
	Mo	98	0.006	ug/L	0.002	36	17	40	19
	Y	89		ug/L			298590	289535	1
	Kr	83		ug/L			554	531	4
>	In	115		ug/L			979916	930087	1
	Ag	107	0.002	ug/L	0.000	17	15	34	9
	Cd	111	0.005	ug/L	0.002	50	63	80	11
	Cd	114	0.002	ug/L	0.000	21	30	46	7
	Sb	121	0.029	ug/L	0.004	13	102	519	10
	Sb	123	0.030	ug/L	0.004	14	72	399	12
	Ba	135	0.004	ug/L	0.001	30	11	28	17
	Ba	137	0.004	ug/L	0.000	12	17	41	7
>	Tb	159		ug/L			1160798	1076174	0
	Tl	205	0.007	ug/L	0.003	43	51	256	35
	Pb	208	0.002	ug/L	0.000	13	139	229	5
	Bi	209		ug/L			2367270	2231253	0
	Th	232	0.123	ug/L	0.026	20	21	4831	20
	U	238	0.001	ug/L	0.000	7	3	34	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	641814	1
[	Be	9	26.263	ug/L	0.843	3	5	52222	2
	C	13		ug/L			58801	53288	1
	Cl	37		ug/L			3025336	3055405	2
[>	Sc	45		ug/L			671354	630484	0
[	V	51	25.819	ug/L	0.241	0	5156	344883	1
[	V-1	51	25.904	ug/L	0.296	1	130	341042	2
[	Cr	52	26.456	ug/L	0.248	0	15247	316265	0
[	Cr	53	26.735	ug/L	0.265	0	115	34509	1
[	Mn	55	26.583	ug/L	0.132	0	250	418605	0
[	Co	59	26.248	ug/L	0.372	1	40	320697	1
[>	Ge	72		ug/L			457613	461330	0
[	Ni	60	25.874	ug/L	0.297	1	22	72351	0
[	Ni	62	26.080	ug/L	0.153	0	29	10277	0
[	Cu	63	26.070	ug/L	0.451	1	58	163710	1
[	Cu	65	26.015	ug/L	0.199	0	28	73815	1
[	Zn	66	81.720	ug/L	0.448	0	143	136715	0
[	Zn	67	77.963	ug/L	2.808	3	23	21261	4
[	Zn	68	78.751	ug/L	1.236	1	137	94803	1
[	As	75	24.716	ug/L	0.366	1	267	38775	1
[	As-1	75	24.876	ug/L	0.658	2	8149	46933	1
[	Se	82	78.606	ug/L	0.836	1	-5	13329	1
[	Se	78	79.212	ug/L	1.205	1	8278	42387	1
[	Mo	98	22.353	ug/L	0.066	0	17	100117	0
	Y	89		ug/L			298590	294680	2
	Kr	83		ug/L			554	511	5
[>	In	115		ug/L			979916	932376	2
[	Ag	107	24.217	ug/L	0.718	2	15	314797	0
[	Cd	111	25.109	ug/L	0.607	2	63	113967	0
[	Cd	114	25.528	ug/L	0.923	3	30	287983	1
[	Sb	121	25.405	ug/L	0.521	2	102	366028	0
[	Sb	123	25.135	ug/L	0.848	3	72	277466	1
[	Ba	135	26.346	ug/L	0.712	2	11	106473	0
[	Ba	137	25.758	ug/L	0.561	2	17	179781	0
[>	Tb	159		ug/L			1160798	1088396	1
[	Tl	205	27.441	ug/L	0.369	1	51	860919	0
[	Pb	208	27.177	ug/L	0.337	1	139	1125021	0
[	Bi	209		ug/L			2367270	2259344	0
[	Th	232	27.067	ug/L	0.548	2	21	1068581	1
[	U	238	27.065	ug/L	0.354	1	3	1086886	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~cr Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	673538	1
	Be	9	0.218	ug/L	0.008	3	5	460	4
	C	13		ug/L			58801	58284	2
	Cl	37		ug/L			3025336	3079334	2
>	Sc	45		ug/L			671354	650187	1
	V	51	6.992	ug/L	0.042	0	5156	99953	1
	V-1	51	7.024	ug/L	0.052	0	130	95456	2
	Cr	52	5.532	ug/L	0.136	2	15247	79867	1
	Cr	53	5.633	ug/L	0.069	1	115	7586	2
	Mn	55	186.614	ug/L	1.028	0	250	3028956	1
	Co	59	2.068	ug/L	0.033	1	40	26088	1
>	Ge	72		ug/L			457613	465896	0
	Ni	60	5.404	ug/L	0.144	2	22	15279	2
	Ni	62	5.587	ug/L	0.067	1	29	2247	1
	Cu	63	4.374	ug/L	0.064	1	58	27785	1
	Cu	65	4.409	ug/L	0.037	0	28	12657	0
	Zn	66	27.038	ug/L	0.376	1	143	45778	1
	Zn	67	30.940	ug/L	0.700	2	23	8534	2
	Zn	68	29.433	ug/L	0.197	0	137	35871	0
	As	75	2.424	ug/L	0.048	1	267	4085	1
	As-1	75	2.421	ug/L	0.032	1	8149	12102	0
	Se	82	0.047	ug/L	0.108	228	-5	2	701
	Se	78	0.026	ug/L	0.062	235	8278	8440	0
	Mo	98	0.083	ug/L	0.002	2	17	390	2
	Y	89		ug/L			298590	322444	1
	Kr	83		ug/L			554	561	5
>	In	115		ug/L			979916	936450	1
	Ag	107	0.039	ug/L	0.004	10	15	529	8
	Cd	111	0.208	ug/L	0.008	3	63	1006	1
	Cd	114	0.181	ug/L	0.003	1	30	2077	1
	Sb	121	0.042	ug/L	0.004	10	102	708	7
	Sb	123	0.039	ug/L	0.005	12	72	501	8
	Ba	135	85.653	ug/L	1.840	2	11	347701	0
	Ba	137	84.132	ug/L	0.712	0	17	589864	0
>	Tb	159		ug/L			1160798	1111161	1
	Tl	205	0.039	ug/L	0.002	3	51	1313	4
	Pb	208	10.359	ug/L	0.181	1	139	437841	0
	Bi	209		ug/L			2367270	2245097	0
	Th	232	1.168	ug/L	0.076	6	21	47089	5
	U	238	0.253	ug/L	0.003	1	3	10395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT
~~Mn, Ba~~

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	672130	2
[	Be	9	1.016	ug/L	0.058	5	5	2118	3
	C	13		ug/L			58801	72062	3
	Cl	37		ug/L			3025336	3089820	2
[>	Sc	45		ug/L			671354	685586	1
[	V	51	33.349	ug/L	0.675	2	5156	482761	1
[	V-1	51	33.559	ug/L	0.632	1	130	480291	0
[	Cr	52	26.294	ug/L	0.627	2	15247	341857	1
[	Cr	53	26.965	ug/L	0.642	2	115	37840	1
[	Mn	55	875.615	ug/L	22.956	2	250	14982253	1
[	Co	59	9.816	ug/L	0.325	3	40	130408	2
[>	Ge	72		ug/L			457613	454915	0
[	Ni	60	26.090	ug/L	0.392	1	22	71942	1
[	Ni	62	28.941	ug/L	0.839	2	29	11242	2
[	Cu	63	21.319	ug/L	0.445	2	58	132024	2
[	Cu	65	22.099	ug/L	0.280	1	28	61838	1
[	Zn	66	130.811	ug/L	2.985	2	143	215724	2
[	Zn	67	150.801	ug/L	0.804	0	23	40527	1
[	Zn	68	144.061	ug/L	1.028	0	137	170908	0
[	As	75	12.009	ug/L	0.187	1	267	18714	1
[	As-1	75	12.105	ug/L	0.223	1	8149	26680	1
[	Se	82	~~-0.229~~	ug/L	0.092	40	-5	-43	35
[	Se	78	0.706	ug/L	0.235	33	8278	8529	1
[	Mo	98	0.359	ug/L	0.002	0	17	1600	0
	Y	89		ug/L			298590	440007	2
	Kr	83		ug/L			554	887	4
[>	In	115		ug/L			979916	933421	1
[	Ag	107	~~0.194~~	ug/L	0.006	2	15	2543	1
[	Cd	111	1.044	ug/L	0.035	3	63	4802	2
[	Cd	114	0.874	ug/L	0.012	1	30	9902	1
[	Sb	121	~~0.078~~	ug/L	0.002	2	102	1220	3
[	Sb	123	0.074	ug/L	0.002	3	72	891	3
[	Ba	135	430.813	ug/L	4.832	1	11	1743387	0
[	Ba	137	416.844	ug/L	4.701	1	17	2913016	0
[>	Tb	159		ug/L			1160798	1136635	1
[	Tl	205	~~0.171~~	ug/L	0.002	1	51	5654	1
[	Pb	208	50.482	ug/L	0.666	1	139	2182268	0
[	Bi	209		ug/L			2367270	2191684	0
[	Th	232	4.809	ug/L	0.021	0	21	198308	0
[	U	238	1.232	ug/L	0.013	1	3	51666	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:24:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ag, Mn, Ba~~
11.16.12 NLT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	681780	2
[	Be	9	0.984	ug/L	0.044	4	5	2083	3
	C	13		ug/L			58801	71989	1
	Cl	37		ug/L			3025336	3106861	2
[>	Sc	45		ug/L			671354	708845	0
[	V	51	32.204	ug/L	0.435	1	5156	482266	1
[	V-1	51	32.441	ug/L	0.438	1	130	480133	1
[	Cr	52	29.573	ug/L	0.512	1	15247	395580	1
[	Cr	53	30.344	ug/L	0.266	0	115	44018	1
[	Mn	55	907.916	ug/L	8.268	0	250	16065415	0
[	Co	59	9.492	ug/L	0.199	2	40	130423	2
[>	Ge	72		ug/L			457613	455525	1
[	Ni	60	32.368	ug/L	0.885	2	22	89353	1
[	Ni	62	34.005	ug/L	0.285	0	29	13222	0
[	Cu	63	21.709	ug/L	0.442	2	58	134587	0
[	Cu	65	22.242	ug/L	0.374	1	28	62310	0
[	Zn	66	130.736	ug/L	0.723	0	143	215868	0
[	Zn	67	150.822	ug/L	3.545	2	23	40578	1
[	Zn	68	141.740	ug/L	4.005	2	137	168349	1
[	As	75	11.358	ug/L	0.129	1	267	17738	0
[	As-1	75	11.434	ug/L	0.179	1	8149	25682	0
[	Se	82	u-0.258	ug/L	0.108	41	-5	-48	38
[	Se	78	0.604	ug/L	0.301	49	8278	8496	1
[	Mo	98	0.329	ug/L	0.032	9	17	1471	8
	Y	89		ug/L			298590	437201	0
	Kr	83		ug/L			554	888	6
[>	In	115		ug/L			979916	933694	1
[	Ag	107	u 0.190	ug/L	0.006	3	15	2489	2
[	Cd	111	1.085	ug/L	0.034	3	63	4991	3
[	Cd	114	0.889	ug/L	0.009	0	30	10080	0
[	Sb	121	u 0.072	ug/L	0.003	3	102	1139	3
[	Sb	123	0.071	ug/L	0.003	4	72	855	3
[	Ba	135	420.311	ug/L	6.647	1	11	1701386	0
[	Ba	137	406.648	ug/L	8.208	2	17	2842494	0
[>	Tb	159		ug/L			1160798	1130467	1
[	Tl	205	u 0.167	ug/L	0.005	2	51	5482	3
[	Pb	208	48.463	ug/L	0.536	1	139	2083637	0
[	Bi	209		ug/L			2367270	2180455	0
[	Th	232	4.631	ug/L	0.088	1	21	189897	1
[	U	238	1.224	ug/L	0.022	1	3	51053	0

ICP-MS Quantitative Analysis - Summary Report

FK MA BAT 11-16-12 MJJ

Sample ID: VR31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	670483	1
[	Be	9	26.029	ug/L	0.308	1	5	54077	1
	C	13		ug/L			58801	71566	2
	Cl	37		ug/L			3025336	3092990	1
[>	Sc	45		ug/L			671354	700272	2
[	V	51	58.339	ug/L	0.744	1	5156	858558	1
[	V-1	51	58.782	ug/L	0.820	1	130	859142	1
[	Cr	52	47.711	ug/L	1.369	2	15247	620458	0
[	Cr	53	49.135	ug/L	1.696	3	115	70298	0
[	Mn	55	888.814	ug/L	41.923	4	250	15524293	2
[	Co	59	32.325	ug/L	0.741	2	40	438556	1
[>	Ge	72		ug/L			457613	447621	3
[	Ni	60	50.592	ug/L	2.634	5	22	137074	1
[	Ni	62	52.436	ug/L	2.669	5	29	19996	2
[	Cu	63	47.659	ug/L	2.501	5	58	289946	1
[	Cu	65	48.932	ug/L	3.126	6	28	134470	2
[	Zn	66	216.103	ug/L	8.958	4	143	350212	1
[	Zn	67	230.839	ug/L	6.949	3	23	60987	1
[	Zn	68	222.531	ug/L	11.257	5	137	259364	1
[	As	75	35.810	ug/L	1.919	5	267	54321	1
[	As-1	75	36.172	ug/L	2.157	5	8149	62518	1
[	Se	82	74.015	ug/L	3.614	4	-5	12162	1
[	Se	78	76.044	ug/L	4.571	6	8278	39759	0
[	Mo	98	20.222	ug/L	0.770	3	17	87798	0
	Y	89		ug/L			298590	440169	0
	Kr	83		ug/L			554	886	0
[>	In	115		ug/L			979916	929357	2
[	Ag	107	21.758	ug/L	0.258	1	15	282010	1
[	Cd	111	25.458	ug/L	0.295	1	63	115201	1
[	Cd	114	25.195	ug/L	0.560	2	30	283383	1
[	Sb	121	1.163	ug/L	0.028	2	102	16789	2
[	Sb	123	1.172	ug/L	0.022	1	72	12968	2
[	Ba	135	439.976	ug/L	13.241	3	11	1772126	0
[	Ba	137	425.149	ug/L	11.956	2	17	2957229	0
[>	Tb	159		ug/L			1160798	1120422	1
[	Tl	205	24.866	ug/L	0.313	1	51	803083	0
[	Pb	208	78.670	ug/L	1.287	1	139	3351967	0
[	Bi	209		ug/L			2367270	2134960	1
[	Th	232	29.613	ug/L	0.477	1	21	1203423	0
[	U	238	27.278	ug/L	0.529	1	3	1127476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 APOST SWN

Sb

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, November 15, 2012 14:32:31

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	674945	1
	Be	9	23.537	ug/L	0.839	3	5	49224	3
	C	13		ug/L			58801	74723	2
	Cl	37		ug/L			3025336	3106433	1
>	Sc	45		ug/L			671354	707054	2
	V	51	52.713	ug/L	0.094	0	5156	783934	2
	V-1	51	53.034	ug/L	0.311	0	130	782761	1
	Cr	52	45.462	ug/L	1.251	2	15247	597736	0
	Cr	53	46.495	ug/L	2.034	4	115	67169	2
	Mn	55	874.289	ug/L	23.988	2	250	15425904	1
	Co	59	30.677	ug/L	1.207	3	40	420119	2
>	Ge	72		ug/L			457613	450971	1
	Ni	60	49.136	ug/L	0.364	0	22	134307	2
	Ni	62	50.430	ug/L	0.549	1	29	19399	1
	Cu	63	43.996	ug/L	1.140	2	58	270004	2
	Cu	65	44.543	ug/L	0.887	1	28	123535	2
	Zn	66	200.025	ug/L	8.135	4	143	326783	2
	Zn	67	220.831	ug/L	1.481	0	23	58825	2
	Zn	68	213.785	ug/L	4.968	2	137	251309	1
	As	75	34.560	ug/L	0.509	1	267	52891	0
	As-1	75	34.457	ug/L	0.588	1	8149	60453	0
	Se	82	69.700	ug/L	1.283	1	-5	11552	1
	Se	78	69.970	ug/L	1.647	2	8278	37551	1
	Mo	98	20.897	ug/L	0.741	3	17	91470	2
	Y	89		ug/L			298590	448291	0
	Kr	83		ug/L			554	855	1
>	In	115		ug/L			979916	910154	0
	Ag	107	20.863	ug/L	0.635	3	15	264818	2
	Cd	111	23.674	ug/L	1.007	4	63	104914	3
	Cd	114	23.622	ug/L	0.783	3	30	260227	2
	Sb	121	22.439	ug/L	0.751	3	102	315653	3
	Sb	123	22.038	ug/L	0.456	2	72	237584	1
	Ba	135	468.132	ug/L	5.727	1	11	1847256	0
	Ba	137	448.936	ug/L	2.569	0	17	3059485	1
>	Tb	159		ug/L			1160798	1130035	0
	Tl	205	22.921	ug/L	0.648	2	51	746656	2
	Pb	208	72.890	ug/L	0.790	1	139	3132803	0
	Bi	209		ug/L			2367270	2149611	0
	Th	232	27.504	ug/L	0.622	2	21	1127427	1
	U	238	24.154	ug/L	0.755	3	3	1007011	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ti, Mn, Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	698329	2
	Be	**9**	**0.623**	ug/L	0.034	5	5	1353	4
	C	**13**		ug/L			58801	78455	1
	Cl	**37**		ug/L			3025336	3160350	1
>	**Sc**	**45**		ug/L			671354	716170	1
	V	**51**	**34.020**	ug/L	0.919	2	5156	514298	1
	V-1	**51**	**34.234**	ug/L	0.763	2	130	511776	1
	Cr	**52**	**31.894**	ug/L	0.597	1	15247	429684	0
	Cr	**53**	**32.587**	ug/L	0.233	0	115	47748	1
	Mn	**55**	**1063.232**	ug/L	28.748	2	250	19002631	1
	Co	**59**	**8.605**	ug/L	0.162	1	40	119440	0
>	**Ge**	**72**		ug/L			457613	456126	1
	Ni	**60**	**20.904**	ug/L	0.185	0	22	57806	1
	Ni	**62**	**22.903**	ug/L	0.461	2	29	8927	1
	Cu	**63**	**17.626**	ug/L	0.087	0	58	109446	0
	Cu	**65**	**18.048**	ug/L	0.413	2	28	50633	1
	Zn	**66**	**256.240**	ug/L	7.636	2	143	423455	2
	Zn	**67**	**257.678**	ug/L	4.340	1	23	69408	0
	Zn	**68**	**258.967**	ug/L	4.660	1	137	307906	1
	As	**75**	**12.264**	ug/L	0.089	0	267	19156	0
	As-1	**75**	**12.348**	ug/L	0.179	1	8149	27123	0
	Se	**82**	**-0.148**	ug/L	0.019	12	-5	-30	9
	Se	**78**	**0.494**	ug/L	0.341	68	8278	8460	0
	Mo	**98**	**0.503**	ug/L	0.005	0	17	2246	1
	Y	**89**		ug/L			298590	376488	1
	Kr	**83**		ug/L			554	755	0
>	**In**	**115**		ug/L			979916	944639	0
	Ag	**107**	**0.140**	ug/L	0.006	4	15	1857	3
	Cd	**111**	**2.156**	ug/L	0.013	0	63	9974	1
	Cd	**114**	**2.032**	ug/L	0.024	1	30	23264	1
	Sb	**121**	**0.143**	ug/L	0.007	4	102	2184	5
	Sb	**123**	**0.134**	ug/L	0.008	5	72	1563	5
	Ba	**135**	**347.645**	ug/L	4.971	1	11	1423873	1
	Ba	**137**	**341.216**	ug/L	0.681	0	17	2413434	0
>	**Tb**	**159**		ug/L			1160798	1130115	0
	Tl	**205**	**0.171**	ug/L	0.002	0	51	5624	0
	Pb	**208**	**87.202**	ug/L	0.093	0	139	3748211	0
	Bi	**209**		ug/L			2367270	2210582	0
	Th	**232**	**6.039**	ug/L	0.062	1	21	247579	1
	U	**238**	**0.757**	ug/L	0.007	0	3	31556	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:41:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AF MM~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			726304	679526	1
[	**Be**	**9**	**0.422**	ug/L	0.028	6	5	893	5
	C	**13**		ug/L			58801	77609	2
	Cl	**37**		ug/L			3025336	3126148	0
[>	**Sc**	**45**		ug/L			671354	689327	0
[	**V**	**51**	**28.455**	ug/L	0.535	1	5156	414965	1
[	**V-1**	**51**	**28.609**	ug/L	0.550	1	130	411726	1
[	**Cr**	**52**	**24.742**	ug/L	0.264	1	15247	324384	0
[	**Cr**	**53**	**25.238**	ug/L	0.346	1	115	35619	0
[	**Mn**	**55**	**633.499**	ug/L	8.576	1	250	10900767	1
[	**Co**	**59**	**6.300**	ug/L	0.127	2	40	84185	1
[>	**Ge**	**72**		ug/L			457613	465963	1
[	**Ni**	**60**	**14.726**	ug/L	0.521	3	22	41590	2
[	**Ni**	**62**	**15.883**	ug/L	0.581	3	29	6333	3
[	**Cu**	**63**	**12.043**	ug/L	0.364	3	58	76398	2
[	**Cu**	**65**	**12.506**	ug/L	0.183	1	28	35852	0
[	**Zn**	**66**	**138.331**	ug/L	1.351	0	143	233626	0
[	**Zn**	**67**	**142.198**	ug/L	1.014	0	23	39141	0
[	**Zn**	**68**	**140.902**	ug/L	2.519	1	137	171195	0
[	**As**	**75**	**10.361**	ug/L	0.129	1	267	16574	0
[	**As-1**	**75**	**10.391**	ug/L	0.173	1	8149	24632	0
[	**Se**	**82**	**< 0.035**	ug/L	0.002	6	-5	0	68
[	**Se**	**78**	**0.237**	ug/L	0.168	70	8278	8531	0
[	**Mo**	**98**	**0.435**	ug/L	0.016	3	17	1983	2
	Y	**89**		ug/L			298590	352227	1
	Kr	**83**		ug/L			554	632	2
[>	**In**	**115**		ug/L			979916	955334	1
[	**Ag**	**107**	**< 0.076**	ug/L	0.003	3	15	1020	3
[	**Cd**	**111**	**1.710**	ug/L	0.010	0	63	8014	0
[	**Cd**	**114**	**1.671**	ug/L	0.015	0	30	19349	0
[	**Sb**	**121**	**< 0.081**	ug/L	0.002	2	102	1289	3
[	**Sb**	**123**	**0.078**	ug/L	0.005	6	72	953	4
[	**Ba**	**135**	**213.483**	ug/L	2.849	1	11	884189	0
[	**Ba**	**137**	**214.617**	ug/L	4.197	1	17	1534917	0
[>	**Tb**	**159**		ug/L			1160798	1115462	1
[	**Tl**	**205**	**< 0.130**	ug/L	0.001	0	51	4231	1
[	**Pb**	**208**	**47.375**	ug/L	0.749	1	139	2009688	0
[	**Bi**	**209**		ug/L			2367270	2207211	0
[	**Th**	**232**	**5.264**	ug/L	0.097	1	21	212969	0
[	**U**	**238**	**0.558**	ug/L	0.007	1	3	22949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn Ba~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	675572	1
[	Be	9	0.550	ug/L	0.013	2	5	1156	1
	C	13		ug/L			58801	77971	2
	Cl	37		ug/L			3025336	3147081	1
[>	Sc	45		ug/L			671354	703172	1
[	V	51	32.062	ug/L	0.406	1	5156	476269	1
[	V-1	51	32.326	ug/L	0.546	1	130	474503	1
[	Cr	52	27.375	ug/L	0.142	0	15247	364415	1
[	Cr	53	28.226	ug/L	0.734	2	115	40614	0
[	Mn	55	594.130	ug/L	7.263	1	250	10428099	1
[	Co	59	8.850	ug/L	0.146	1	40	120617	1
[>	Ge	72		ug/L			457613	455730	0
[	Ni	60	19.151	ug/L	0.263	1	22	52909	0
[	Ni	62	20.529	ug/L	0.421	2	29	7998	1
[	Cu	63	16.035	ug/L	0.314	1	58	99490	1
[	Cu	65	16.391	ug/L	0.437	2	28	45954	2
[	Zn	66	144.591	ug/L	2.035	1	143	238843	1
[	Zn	67	159.247	ug/L	2.659	1	23	42871	1
[	Zn	68	152.140	ug/L	1.222	0	137	180806	0
[	As	75	9.950	ug/L	0.191	1	267	15579	1
[	As-1	75	10.097	ug/L	0.203	2	8149	23640	0
[	Se	82	U -0.183	ug/L	0.030	16	-5	-35	13
[	Se	78	0.703	ug/L	0.159	22	8278	8543	0
[	Mo	98	0.419	ug/L	0.009	2	17	1869	1
	Y	89		ug/L			298590	365735	0
	Kr	83		ug/L			554	759	3
[>	In	115		ug/L			979916	933523	0
[	Ag	107	U 0.142	ug/L	0.007	5	15	1863	4
[	Cd	111	0.776	ug/L	0.023	2	63	3586	2
[	Cd	114	0.702	ug/L	0.005	0	30	7967	1
[	Sb	121	U 0.045	ug/L	0.005	10	102	749	8
[	Sb	123	0.044	ug/L	0.005	11	72	550	10
[	Ba	135	351.617	ug/L	2.178	0	11	1423244	1
[	Ba	137	344.317	ug/L	2.932	0	17	2406621	0
[>	Tb	159		ug/L			1160798	1120669	0
[	Tl	205	U 0.134	ug/L	0.001	0	51	4373	0
[	Pb	208	29.457	ug/L	0.101	0	139	1255687	0
[	Bi	209		ug/L			2367270	2172168	0
[	Th	232	6.167	ug/L	0.020	0	21	250714	0
[	U	238	0.796	ug/L	0.001	0	3	32916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	653054	1
[	Be	9	50.935	ug/L	0.279	0	5	103070	1
	C	13		ug/L			58801	55254	0
	Cl	37		ug/L			3025336	3246034	3
[>	Sc	45		ug/L			671354	626960	0
[	V	51	49.795	ug/L	0.110	0	5156	656929	0
[	V-1	51	49.884	ug/L	0.231	0	130	652932	0
[	Cr	52	50.578	ug/L	0.307	0	15247	588304	0
[	Cr	53	50.871	ug/L	0.814	1	115	65200	1
[	Mn	55	50.110	ug/L	0.318	0	250	784487	0
[	Co	59	50.996	ug/L	1.214	2	40	619523	1
[>	Ge	72		ug/L			457613	443132	1
[	Ni	60	49.433	ug/L	1.488	3	22	132720	1
[	Ni	62	50.141	ug/L	1.281	2	29	18948	1
[	Cu	63	50.664	ug/L	1.762	3	58	305416	1
[	Cu	65	50.750	ug/L	0.599	1	28	138271	0
[	Zn	66	50.872	ug/L	1.308	2	143	81777	0
[	Zn	67	52.294	ug/L	0.855	1	23	13702	1
[	Zn	68	50.542	ug/L	1.778	3	137	58471	1
[	As	75	49.700	ug/L	0.885	1	267	74621	0
[	As-1	75	50.125	ug/L	1.089	2	8149	82817	0
[	Se	82	50.158	ug/L	0.754	1	-5	8166	0
[	Se	78	51.653	ug/L	1.517	2	8278	29332	0
[	Mo	98	47.489	ug/L	0.999	2	17	204259	1
	Y	89		ug/L			298590	290226	1
	Kr	83		ug/L			554	535	3
[>	In	115		ug/L			979916	917463	0
[	Ag	107	47.357	ug/L	1.257	2	15	605947	2
[	Cd	111	50.402	ug/L	0.091	0	63	225139	0
[	Cd	114	50.757	ug/L	0.721	1	30	563681	0
[	Sb	121	50.960	ug/L	0.237	0	102	722571	0
[	Sb	123	50.197	ug/L	0.690	1	72	545445	0
[	Ba	135	50.266	ug/L	1.072	2	11	199954	1
[	Ba	137	50.190	ug/L	0.680	1	17	344786	1
[>	Tb	159		ug/L			1160798	1065657	0
[	Tl	205	52.641	ug/L	0.397	0	51	1617129	0
[	Pb	208	51.463	ug/L	0.183	0	139	2085946	0
[	Bi	209		ug/L			2367270	2151419	0
[	Th	232	52.614	ug/L	0.287	0	21	2033951	0
[	U	238	53.008	ug/L	0.660	1	3	2084247	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	638148	0
[	Be	9	0.001	ug/L	0.002	155	5	7	54
	C	13		ug/L			58801	54689	3
	Cl	37		ug/L			3025336	3047486	1
[>	Sc	45		ug/L			671354	617720	0
[	V	51	0.020	ug/L	0.003	14	5156	5007	1
[	V-1	51	-0.002	ug/L	0.002	99	130	97	23
[	Cr	52	0.062	ug/L	0.002	3	15247	14722	0
[	Cr	53	-0.010	ug/L	0.004	35	115	93	4
[	Mn	55	0.014	ug/L	0.002	18	250	441	9
[	Co	59	0.001	ug/L	0.001	57	40	49	15
[>	Ge	72		ug/L			457613	446360	1
[	Ni	60	-0.001	ug/L	0.003	234	22	19	39
[	Ni	62	0.143	ug/L	0.036	24	29	83	15
[	Cu	63	0.009	ug/L	0.001	6	58	113	2
[	Cu	65	0.002	ug/L	0.002	130	28	33	18
[	Zn	66	-0.007	ug/L	0.007	107	143	128	9
[	Zn	67	-0.003	ug/L	0.018	641	23	22	20
[	Zn	68	-0.006	ug/L	0.004	63	137	126	2
[	As	75	-0.006	ug/L	0.009	141	267	251	5
[	As-1	75	0.282	ug/L	0.051	18	8149	8373	0
[	Se	82	-0.028	ug/L	0.024	84	-5	-9	39
[	Se	78	1.033	ug/L	0.209	20	8278	8504	0
[	Mo	98	0.011	ug/L	0.002	21	17	64	15
	Y	89		ug/L			298590	281163	1
	Kr	83		ug/L			554	550	5
[>	In	115		ug/L			979916	926226	0
[	Ag	107	0.003	ug/L	0.001	48	15	47	33
[	Cd	111	0.005	ug/L	0.001	17	63	82	5
[	Cd	114	0.001	ug/L	0.001	81	30	45	30
[	Sb	121	0.057	ug/L	0.004	7	102	913	6
[	Sb	123	0.062	ug/L	0.004	6	72	745	5
[	Ba	135	0.004	ug/L	0.002	44	11	28	26
[	Ba	137	0.006	ug/L	0.003	48	17	54	34
[>	Tb	159		ug/L			1160798	1035087	0
[	Tl	205	0.007	ug/L	0.002	37	51	242	29
[	Pb	208	0.002	ug/L	0.000	16	139	207	6
[	Bi	209		ug/L			2367270	2178604	0
[	Th	232	0.082	ug/L	0.011	12	21	3089	13
[	U	238	0.001	ug/L	0.000	13	3	58	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:15:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	669406	0
[	Be	9	0.407	ug/L	0.012	2	5	848	2
	C	13		ug/L			58801	80581	2
	Cl	37		ug/L			3025336	3193936	2
[>	Sc	45		ug/L			671354	683285	0
[	V	51	35.887	ug/L	0.251	0	5156	517430	0
[	V-1	51	36.082	ug/L	0.246	0	130	514727	0
[	Cr	52	21.298	ug/L	0.311	1	15247	278958	0
[	Cr	53	21.901	ug/L	0.451	2	115	30657	2
[	Mn	55	329.072	ug/L	3.730	1	250	5613192	1
[	Co	59	7.080	ug/L	0.204	2	40	93768	2
[>	Ge	72		ug/L			457613	455954	0
[	Ni	60	15.809	ug/L	0.272	1	22	43704	2
[	Ni	62	17.308	ug/L	0.370	2	29	6751	2
[	Cu	63	20.220	ug/L	0.031	0	58	125500	0
[	Cu	65	20.890	ug/L	0.754	3	28	58592	3
[	Zn	66	108.758	ug/L	1.460	1	143	179787	1
[	Zn	67	108.959	ug/L	0.867	0	23	29354	0
[	Zn	68	108.184	ug/L	1.985	1	137	128679	2
[	As	75	7.705	ug/L	0.089	1	267	12132	1
[	As-1	75	7.849	ug/L	0.055	0	8149	20194	0
[	Se	82	0.414	ug/L	0.043	10	-5	64	10
[	Se	78	1.044	ug/L	0.214	20	8278	8691	0
[	Mo	98	0.459	ug/L	0.011	2	17	2048	1
	Y	89		ug/L			298590	400196	1
	Kr	83		ug/L			554	625	2
[>	In	115		ug/L			979916	930629	0
[	Ag	107	0.157	ug/L	0.002	1	15	2056	1
[	Cd	111	1.489	ug/L	0.020	1	63	6806	1
[	Cd	114	1.440	ug/L	0.020	1	30	16254	1
[	Sb	121	0.113	ug/L	0.005	4	102	1716	4
[	Sb	123	0.114	ug/L	0.009	7	72	1327	7
[	Ba	135	82.352	ug/L	0.496	0	11	332298	0
[	Ba	137	81.904	ug/L	0.850	1	17	570729	1
[>	Tb	159		ug/L			1160798	1100079	1
[	Tl	205	0.137	ug/L	0.004	3	51	4382	2
[	Pb	208	72.029	ug/L	0.789	1	139	3013558	1
[	Bi	209		ug/L			2367270	2170815	0
[	Th	232	4.886	ug/L	0.098	1	21	194989	1
[	U	238	2.901	ug/L	0.038	1	3	117734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:19:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

17.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669174	2
	Be	9	0.680	ug/L	0.002	0	5	1415	2
	C	13		ug/L			58801	70255	3
	Cl	37		ug/L			3025336	3104801	1
>	Sc	45		ug/L			671354	700996	0
	V	51	37.182	ug/L	1.136	3	5156	549741	2
	V-1	51	37.576	ug/L	1.008	2	130	549876	1
	Cr	52	29.206	ug/L	0.908	3	15247	386501	2
	Cr	53	30.477	ug/L	0.725	2	115	43717	1
	Mn	55	523.625	ug/L	1.065	0	250	9162946	0
	Co	59	8.756	ug/L	0.220	2	40	118974	2
>	Ge	72		ug/L			457613	451392	1
	Ni	60	24.045	ug/L	0.747	3	22	65780	2
	Ni	62	25.669	ug/L	0.712	2	29	9896	1
	Cu	63	22.795	ug/L	0.366	1	58	140050	1
	Cu	65	23.468	ug/L	0.311	1	28	65150	0
	Zn	66	122.207	ug/L	4.215	3	143	199922	2
	Zn	67	136.089	ug/L	4.558	3	23	36282	2
	Zn	68	130.021	ug/L	3.751	2	137	153037	1
	As	75	9.811	ug/L	0.105	1	267	15218	0
	As-1	75	9.965	ug/L	0.182	1	8149	23214	0
	Se	82	-0.163	ug/L	0.058	35	-5	-32	28
	Se	78	0.820	ug/L	0.289	35	8278	8510	0
	Mo	98	0.375	ug/L	0.017	4	17	1660	4
	Y	89		ug/L			298590	371868	1
	Kr	83		ug/L			554	789	1
>	In	115		ug/L			979916	924672	0
	Ag	107	0.132	ug/L	0.001	1	15	1718	1
	Cd	111	0.775	ug/L	0.020	2	63	3546	2
	Cd	114	0.684	ug/L	0.020	2	30	7680	2
	Sb	121	0.036	ug/L	0.002	5	102	608	3
	Sb	123	0.032	ug/L	0.005	14	72	418	11
	Ba	135	298.166	ug/L	6.317	2	11	1195360	1
	Ba	137	292.927	ug/L	3.240	1	17	2028058	0
>	Tb	159		ug/L			1160798	1096148	1
	Tl	205	0.142	ug/L	0.002	1	51	4546	2
	Pb	208	31.727	ug/L	0.426	1	139	1322698	0
	Bi	209		ug/L			2367270	2152836	0
	Th	232	8.735	ug/L	0.049	0	21	347366	1
	U	238	0.914	ug/L	0.009	0	3	36970	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:24:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	657743	1
	Be	9	0.507	ug/L	0.033	6	5	1037	4
	C	13		ug/L			58801	76553	3
	Cl	37		ug/L			3025336	3137143	1
>	Sc	45		ug/L			671354	685808	1
	V	51	17.329	ug/L	0.328	1	5156	253482	1
	V-1	51	17.346	ug/L	0.317	1	130	248413	1
	Cr	52	15.116	ug/L	0.170	1	15247	203231	1
	Cr	53	15.167	ug/L	0.140	0	115	21344	1
	Mn	55	667.237	ug/L	18.091	2	250	11420270	1
	Co	59	5.260	ug/L	0.164	3	40	69955	4
>	Ge	72		ug/L			457613	456304	2
	Ni	60	14.100	ug/L	0.124	0	22	39006	2
	Ni	62	15.289	ug/L	0.571	3	29	5968	1
	Cu	63	11.816	ug/L	0.138	1	58	73403	1
	Cu	65	12.204	ug/L	0.355	2	28	34249	1
	Zn	66	128.498	ug/L	4.057	3	143	212455	1
	Zn	67	139.135	ug/L	4.668	3	23	37485	0
	Zn	68	137.508	ug/L	6.747	4	137	163512	2
	As	75	8.079	ug/L	0.230	2	267	12711	1
	As-1	75	8.199	ug/L	0.400	4	8149	20738	0
	Se	82	-0.106	ug/L	0.080	75	-5	-23	60
	Se	78	0.566	ug/L	0.704	124	8278	8490	0
	Mo	98	0.340	ug/L	0.016	4	17	1523	2
	Y	89		ug/L			298590	383551	3
	Kr	83		ug/L			554	696	3
>	In	115		ug/L			979916	945372	0
	Ag	107	0.087	ug/L	0.003	3	15	1160	3
	Cd	111	1.873	ug/L	0.025	1	63	8677	1
	Cd	114	1.797	ug/L	0.047	2	30	20592	2
	Sb	121	0.073	ug/L	0.002	2	102	1162	2
	Sb	123	0.074	ug/L	0.004	4	72	903	4
	Ba	135	288.873	ug/L	1.308	0	11	1184091	0
	Ba	137	280.728	ug/L	1.889	0	17	1987154	0
>	Tb	159		ug/L			1160798	1119393	0
	Tl	205	-0.146	ug/L	0.003	2	51	4753	2
	Pb	208	106.225	ug/L	0.593	0	139	4522433	0
	Bi	209		ug/L			2367270	2183517	0
	Th	232	4.535	ug/L	0.012	0	21	184151	0
	U	238	0.575	ug/L	0.013	2	3	23754	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:28:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn Pb Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660277	1
	Be	9	0.123	ug/L	0.008	6	5	257	5
	C	13		ug/L			58801	63435	0
	Cl	37		ug/L			3025336	3067991	4
>	Sc	45		ug/L			671354	662027	1
	V	51	5.902	ug/L	0.083	1	5156	86689	1
	V-1	51	6.017	ug/L	0.092	1	130	83258	0
	Cr	52	10.575	ug/L	0.191	1	15247	141756	0
	Cr	53	10.963	ug/L	0.304	2	115	14921	1
	Mn	55	139.939	ug/L	1.097	0	250	2312815	1
	Co	59	2.113	ug/L	0.057	2	40	27145	1
>	Ge	72		ug/L			457613	449855	1
	Ni	60	5.476	ug/L	0.094	1	22	14948	0
	Ni	62	5.912	ug/L	0.180	3	29	2294	4
	Cu	63	6.348	ug/L	0.157	2	58	38914	2
	Cu	65	6.577	ug/L	0.087	1	28	18218	1
	Zn	66	114.834	ug/L	4.549	3	143	187227	2
	Zn	67	108.058	ug/L	1.654	1	23	28723	1
	Zn	68	111.601	ug/L	3.758	3	137	130930	2
	As	75	4.779	ug/L	0.054	1	267	7523	1
	As-1	75	5.014	ug/L	0.169	3	8149	15620	0
	Se	82	0.078	ug/L	0.022	27	-5	7	47
	Se	78	0.941	ug/L	0.446	47	8278	8531	1
	Mo	98	0.083	ug/L	0.006	7	17	377	7
	Y	89		ug/L			298590	324782	0
	Kr	83		ug/L			554	560	2
>	In	115		ug/L			979916	934916	1
	Ag	107	0.057	ug/L	0.002	3	15	760	3
	Cd	111	2.931	ug/L	0.051	1	63	13398	1
	Cd	114	2.948	ug/L	0.061	2	30	33380	0
	Sb	121	0.053	ug/L	0.000	0	102	856	1
	Sb	123	0.054	ug/L	0.004	8	72	665	8
	Ba	135	43.224	ug/L	0.522	1	11	175226	1
	Ba	137	42.392	ug/L	0.102	0	17	296765	0
>	Tb	159		ug/L			1160798	1072424	0
	Tl	205	0.111	ug/L	0.001	0	51	3477	1
	Pb	208	84.415	ug/L	0.475	0	139	3443084	0
	Bi	209		ug/L			2367270	2206189	0
	Th	232	1.240	ug/L	0.010	0	21	48239	0
	U	238	0.166	ug/L	0.003	1	3	6578	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:32:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	665866	0
	Be	9	0.564	ug/L	0.003	0	5	1168	0
	C	13		ug/L			58801	86475	4
	Cl	37		ug/L			3025336	3153528	0
>	Sc	45		ug/L			671354	705952	0
	V	51	28.815	ug/L	0.566	1	5156	430315	1
	V-1	51	29.088	ug/L	0.289	0	130	428742	0
	Cr	52	50.609	ug/L	1.449	2	15247	662765	2
	Cr	53	51.554	ug/L	1.592	3	115	74389	2
	Mn	55	644.019	ug/L	8.250	1	250	11348910	0
	Co	59	9.783	ug/L	0.085	0	40	133878	1
>	Ge	72		ug/L			457613	449480	0
	Ni	60	27.394	ug/L	0.094	0	22	74637	0
	Ni	62	29.370	ug/L	1.047	3	29	11273	3
	Cu	63	31.639	ug/L	0.429	1	58	193560	1
	Cu	65	32.121	ug/L	0.736	2	28	88797	2
	Zn	66	550.649	ug/L	8.791	1	143	896736	1
	Zn	67	524.104	ug/L	4.641	0	23	139110	1
	Zn	68	544.587	ug/L	8.982	1	137	637972	1
	As	75	23.702	ug/L	0.270	1	267	36241	1
	As-1	75	23.922	ug/L	0.302	1	8149	44284	1
	Se	82	0.176	ug/L	0.105	59	-5	23	72
	Se	78	1.244	ug/L	0.173	13	8278	8652	0
	Mo	98	0.425	ug/L	0.017	3	17	1870	3
	Y	89		ug/L			298590	439800	0
	Kr	83		ug/L			554	728	3
>	In	115		ug/L			979916	978306	1
	Ag	107	0.250	ug/L	0.010	4	15	3429	3
	Cd	111	13.687	ug/L	0.071	0	63	65234	0
	Cd	114	13.694	ug/L	0.178	1	30	162189	0
	Sb	121	0.245	ug/L	0.010	3	102	3806	2
	Sb	123	0.238	ug/L	0.005	1	72	2832	1
	Ba	135	208.286	ug/L	5.230	2	11	883366	1
	Ba	137	207.928	ug/L	3.046	1	17	1522968	0
>	Tb	159		ug/L			1160798	1122794	0
	Tl	205	0.522	ug/L	0.008	1	51	16955	1
	Pb	208	390.055	ug/L	2.097	0	139	16656267	0
	Bi	209		ug/L			2367270	2197146	0
	Th	232	5.886	ug/L	0.058	0	21	239765	0
	U	238	0.802	ug/L	0.005	0	3	33236	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:36:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn 11.16.12 MD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	682210	1
	Be	9	0.946	ug/L	0.036	3	5	2003	2
	C	13		ug/L			58801	88206	3
	Cl	37		ug/L			3025336	3220928	1
>	Sc	45		ug/L			671354	714096	1
	V	51	28.808	ug/L	0.700	2	5156	435110	1
	V-1	51	28.997	ug/L	0.762	2	130	432258	1
	Cr	52	28.944	ug/L	0.532	1	15247	390315	0
	Cr	53	29.561	ug/L	0.615	2	115	43193	0
	Mn	55	1267.402	ug/L	30.160	2	250	22588239	1
	Co	59	17.782	ug/L	0.060	0	40	246102	1
>	Ge	72		ug/L			457613	455857	0
	Ni	60	41.561	ug/L	0.607	1	22	114833	1
	Ni	62	43.462	ug/L	0.815	1	29	16904	1
	Cu	63	34.594	ug/L	0.774	2	58	214645	2
	Cu	65	35.502	ug/L	0.285	0	28	99528	1
	Zn	66	189.077	ug/L	0.787	0	143	312378	0
	Zn	67	196.555	ug/L	3.707	1	23	52923	1
	Zn	68	199.365	ug/L	5.140	2	137	236945	2
	As	75	17.851	ug/L	0.052	0	267	27747	0
	As-1	75	17.977	ug/L	0.026	0	8149	35768	0
	Se	82	-0.016	ug/L	0.026	157	-5	-8	53
	Se	78	0.951	ug/L	0.108	11	8278	8651	0
	Mo	98	1.116	ug/L	0.014	1	17	4956	0
	Y	89		ug/L			298590	491114	1
	Kr	83		ug/L			554	858	2
>	In	115		ug/L			979916	934135	2
	Ag	107	0.186	ug/L	0.007	3	15	2440	3
	Cd	111	3.351	ug/L	0.084	2	63	15288	0
	Cd	114	3.182	ug/L	0.054	1	30	36003	0
	Sb	121	0.130	ug/L	0.005	3	102	1977	1
	Sb	123	0.135	ug/L	0.004	3	72	1556	1
	Ba	135	248.316	ug/L	8.423	3	11	1005223	1
	Ba	137	249.377	ug/L	4.231	1	17	1743825	1
>	Tb	159		ug/L			1160798	1122418	2
	Tl	205	0.236	ug/L	0.010	4	51	7668	1
	Pb	208	106.027	ug/L	3.003	2	139	4524052	0
	Bi	209		ug/L			2367270	2143333	1
	Th	232	7.142	ug/L	0.123	1	21	290753	1
	U	238	1.081	ug/L	0.033	3	3	44751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:42:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~TP Mn~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			726304	654111	1
[	**Be**	**9**	**0.564**	ug/L	0.019	3	5	1148	1
	C	**13**		ug/L			58801	77009	2
	Cl	**37**		ug/L			3025336	3032412	1
[>	**Sc**	**45**		ug/L			671354	695448	1
[	**V**	**51**	**30.830**	ug/L	1.145	3	5156	453066	2
[	**V-1**	**51**	**30.859**	ug/L	1.219	3	130	447937	2
[	**Cr**	**52**	**17.705**	ug/L	0.178	1	15247	238676	0
[	**Cr**	**53**	**17.765**	ug/L	0.332	1	115	25330	0
[	**Mn**	**55**	**863.901**	ug/L	23.840	2	250	14994078	1
[	**Co**	**59**	**7.032**	ug/L	0.257	3	40	94793	3
[>	**Ge**	**72**		ug/L			457613	456027	0
[	**Ni**	**60**	**13.888**	ug/L	0.152	1	22	38399	0
[	**Ni**	**62**	**15.079**	ug/L	0.504	3	29	5886	3
[	**Cu**	**63**	**12.199**	ug/L	0.323	2	58	75746	2
[	**Cu**	**65**	**12.739**	ug/L	0.236	1	28	35747	2
[	**Zn**	**66**	**184.237**	ug/L	6.900	3	143	304457	3
[	**Zn**	**67**	**186.502**	ug/L	3.339	1	23	50238	2
[	**Zn**	**68**	**186.679**	ug/L	2.744	1	137	221961	1
[	**As**	**75**	**14.218**	ug/L	0.042	0	267	22163	0
[	**As-1**	**75**	**14.461**	ug/L	0.082	0	8149	30370	0
[	**Se**	**82**	**-0.107**	ug/L	0.067	62	-5	-23	47
[	**Se**	**78**	**1.034**	ug/L	0.150	14	8278	8689	0
[	**Mo**	**98**	**0.389**	ug/L	0.010	2	17	1737	3
	Y	**89**		ug/L			298590	366460	1
	Kr	**83**		ug/L			554	719	3
[>	**In**	**115**		ug/L			979916	940423	1
[	**Ag**	**107**	**0.094**	ug/L	0.003	3	15	1251	2
[	**Cd**	**111**	**2.428**	ug/L	0.092	3	63	11170	2
[	**Cd**	**114**	**2.391**	ug/L	0.070	2	30	27236	1
[	**Sb**	**121**	**0.185**	ug/L	0.007	3	102	2791	2
[	**Sb**	**123**	**0.187**	ug/L	0.008	4	72	2149	2
[	**Ba**	**135**	**247.443**	ug/L	8.280	3	11	1008614	1
[	**Ba**	**137**	**245.503**	ug/L	7.146	2	17	1728208	1
[>	**Tb**	**159**		ug/L			1160798	1100374	1
[	**Tl**	**205**	**0.217**	ug/L	0.006	2	51	6922	1
[	**Pb**	**208**	**125.130**	ug/L	3.348	2	139	5235412	1
[	**Bi**	**209**		ug/L			2367270	2156542	0
[	**Th**	**232**	**5.759**	ug/L	0.225	3	21	229816	2
[	**U**	**238**	**0.550**	ug/L	0.010	1	3	22321	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:46:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AC MW~~ 11.16.12 MW

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	667813	2
	Be	9	1.028	ug/L	0.009	0	5	2132	3
	C	13		ug/L			58801	70718	1
	Cl	37		ug/L			3025336	3124918	1
>	Sc	45		ug/L			671354	728616	1
	V	51	35.473	ug/L	0.502	1	5156	545479	2
	V-1	51	35.701	ug/L	0.656	1	130	543057	1
	Cr	52	38.421	ug/L	0.236	0	15247	523315	1
	Cr	53	39.173	ug/L	1.085	2	115	58360	1
	Mn	55	794.786	ug/L	15.153	1	250	14453630	0
	Co	59	9.691	ug/L	0.212	2	40	136840	0
>	Ge	72		ug/L			457613	452968	1
	Ni	60	31.588	ug/L	0.721	2	22	86714	1
	Ni	62	34.544	ug/L	1.143	3	29	13355	2
	Cu	63	35.520	ug/L	0.870	2	58	218945	1
	Cu	65	36.683	ug/L	0.638	1	28	102180	1
	Zn	66	172.125	ug/L	6.565	3	143	282507	2
	Zn	67	185.298	ug/L	2.461	1	23	49575	0
	Zn	68	179.224	ug/L	3.091	1	137	211659	0
	As	75	10.408	ug/L	0.217	2	267	16184	1
	As-1	75	10.593	ug/L	0.260	2	8149	24253	0
	Se	82	-0.098	ug/L	0.020	20	-5	-21	15
	Se	78	1.243	ug/L	0.188	15	8278	8718	0
	Mo	98	0.543	ug/L	0.006	1	17	2404	1
	Y	89		ug/L			298590	554725	1
	Kr	83		ug/L			554	925	3
>	In	115		ug/L			979916	924382	1
	Ag	107	0.476	ug/L	0.009	1	15	6152	1
	Cd	111	1.064	ug/L	0.038	3	63	4846	3
	Cd	114	0.851	ug/L	0.021	2	30	9554	1
	Sb	121	0.042	ug/L	0.001	2	102	692	2
	Sb	123	0.042	ug/L	0.002	4	72	522	3
	Ba	135	298.621	ug/L	4.371	1	11	1196747	0
	Ba	137	290.337	ug/L	2.599	0	17	2009421	0
>	Tb	159		ug/L			1160798	1126736	0
	Tl	205	0.186	ug/L	0.006	3	51	6082	2
	Pb	208	26.887	ug/L	0.265	0	139	1152291	0
	Bi	209		ug/L			2367270	2133097	0
	Th	232	8.379	ug/L	0.115	1	21	342472	0
	U	238	2.031	ug/L	0.025	1	3	84421	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 400
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:50:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn Ba~~ Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	636136	1
[	Be	9	0.041	ug/L	0.003	7	5	85	7
	C	13		ug/L			58801	61326	2
	Cl	37		ug/L			3025336	3058642	2
[>	Sc	45		ug/L			671354	632888	0
[	V	51	1.298	ug/L	0.033	2	5156	22017	1
[	V-1	51	1.304	ug/L	0.035	2	130	17341	2
[	Cr	52	1.003	ug/L	0.030	3	15247	25864	1
[	Cr	53	1.021	ug/L	0.022	2	115	1427	2
[	Mn	55	124.604	ug/L	3.450	2	250	1968617	2
[	Co	59	0.386	ug/L	0.001	0	40	4772	0
[>	Ge	72		ug/L			457613	444686	1
[	Ni	60	0.797	ug/L	0.019	2	22	2168	1
[	Ni	62	0.903	ug/L	0.069	7	29	371	8
[	Cu	63	1.174	ug/L	0.030	2	58	7157	1
[	Cu	65	1.198	ug/L	0.039	3	28	3302	3
[	Zn	66	25.175	ug/L	0.267	1	143	40689	0
[	Zn	67	25.964	ug/L	0.638	2	23	6838	1
[	Zn	68	25.970	ug/L	0.246	0	137	30224	0
[	As	75	0.899	ug/L	0.030	3	267	1609	2
[	As-1	75	1.215	ug/L	0.081	6	8149	9740	0
[	Se	82	0.089	ug/L	0.059	65	-5	9	102
[	Se	78	1.165	ug/L	0.239	20	8278	8526	0
[	Mo	98	0.017	ug/L	0.001	4	17	91	3
	Y	89		ug/L			298590	298434	1
	Kr	83		ug/L			554	506	1
[>	In	115		ug/L			979916	941485	1
[	Ag	107	0.009	ug/L	0.000	3	15	129	2
[	Cd	111	0.288	ug/L	0.005	1	63	1379	1
[	Cd	114	0.289	ug/L	0.009	3	30	3318	1
[	Sb	121	0.011	ug/L	0.002	16	102	256	9
[	Sb	123	0.012	ug/L	0.002	19	72	207	11
[	Ba	135	37.630	ug/L	0.775	2	11	153598	0
[	Ba	137	37.562	ug/L	0.159	0	17	264796	0
[>	Tb	159		ug/L			1160798	1052930	0
[	Tl	205	0.017	ug/L	0.001	3	51	563	3
[	Pb	208	13.938	ug/L	0.179	1	139	558265	1
[	Bi	209		ug/L			2367270	2205197	0
[	Th	232	0.296	ug/L	0.003	1	21	11334	1
[	U	238	0.028	ug/L	0.001	2	3	1087	1

VR33 : 00278

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	653170	1
[	Be	9	0.761	ug/L	0.013	1	5	1545	1
	C	13		ug/L			58801	81288	3
	Cl	37		ug/L			3025336	3033576	0
[>	Sc	45		ug/L			671354	706731	2
[	V	51	23.449	ug/L	1.012	4	5156	351351	2
[	V-1	51	23.534	ug/L	0.987	4	130	347072	2
[	Cr	52	16.990	ug/L	0.519	3	15247	233317	0
[	Cr	53	17.253	ug/L	0.439	2	115	24996	1
[	Mn	55	2150.704	ug/L	61.340	2	250	37926409	0
[	Co	59	6.627	ug/L	0.107	1	40	90797	2
[>	Ge	72		ug/L			457613	456813	1
[	Ni	60	14.680	ug/L	0.036	0	22	40660	1
[	Ni	62	15.894	ug/L	0.225	1	29	6214	2
[	Cu	63	21.081	ug/L	0.744	3	58	131045	1
[	Cu	65	22.443	ug/L	0.785	3	28	63083	5
[	Zn	66	449.072	ug/L	12.922	2	143	743120	2
[	Zn	67	461.213	ug/L	1.219	0	23	124416	1
[	Zn	68	464.143	ug/L	13.107	2	137	552468	1
[	As	75	16.738	ug/L	0.287	1	267	26085	0
[	As-1	75	16.850	ug/L	0.367	2	8149	34099	0
[	Se	82	U 0.088	ug/L	0.205	232	-5	9	378
[	Se	78	0.728	ug/L	0.390	53	8278	8572	0
[	Mo	98	0.375	ug/L	0.020	5	17	1677	3
	Y	89		ug/L			298590	396305	2
	Kr	83		ug/L			554	710	11
[>	In	115		ug/L			979916	958845	1
[	Ag	107	U 0.160	ug/L	0.009	5	15	2153	4
[	Cd	111	5.550	ug/L	0.089	1	63	25960	0
[	Cd	114	5.416	ug/L	0.073	1	30	62884	0
[	Sb	121	0.261	ug/L	0.009	3	102	3971	1
[	Sb	123	0.258	ug/L	0.005	2	72	2998	3
[	Ba	135	748.464	ug/L	13.025	1	11	3111128	0
[	Ba	137	743.815	ug/L	14.705	1	17	5339048	0
[>	Tb	159		ug/L			1160798	1120387	0
[	Tl	205	0.303	ug/L	0.003	0	51	9821	1
[	Pb	208	257.186	ug/L	2.655	1	139	10958566	0
[	Bi	209		ug/L			2367270	2196515	0
[	Th	232	5.193	ug/L	0.079	1	21	211053	0
[	U	238	0.506	ug/L	0.003	0	3	20936	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635238 ✓	1
	Be	9	54.646	ug/L	1.333	2	5	107543	1
	C	13		ug/L			58801	56029	2
	Cl	37		ug/L			3025336	3144406	1
>	Sc	45		ug/L			671354	623256 ✓	1
	V	51	50.192	ug/L	0.175	0	5156	658203	0
	V-1	51	50.479	ug/L	0.474	0	130	656770	0
	Cr	52	50.519	ug/L	0.540	1	15247	584145	1
	Cr	53	51.457	ug/L	0.988	1	115	65550	1
	Mn	55	50.346	ug/L	0.069	0	250	783508	1
	Co	59	51.843	ug/L	1.826	3	40	626010	2
>	Ge	72		ug/L			457613	453894 ✓	1
	Ni	60	48.799	ug/L	0.890	1	22	134224	0
	Ni	62	50.125	ug/L	1.243	2	29	19407	2
	Cu	63	49.427	ug/L	0.655	1	58	305288	0
	Cu	65	49.250	ug/L	0.593	1	28	137449	0
	Zn	66	49.719	ug/L	1.167	2	143	81876	1
	Zn	67	50.015	ug/L	0.460	0	23	13426	1
	Zn	68	49.375	ug/L	0.301	0	137	58532	0
	As	75	48.609	ug/L	0.318	0	267	74773	1
	As-1	75	48.872	ug/L	0.661	1	8149	82922	0
	Se	82	49.155	ug/L	0.122	0	-5	8198	1
	Se	78	50.030	ug/L	1.282	2	8278	29361	0
	Mo	98	46.368	ug/L	0.696	1	17	204295	1
	Y	89		ug/L			298590	287369	0
	Kr	83		ug/L			554	528	2
>	In	115		ug/L			979916	909941 ✓	2
	Ag	107	48.363	ug/L	0.269	0	15	613832	2
	Cd	111	50.995	ug/L	0.236	0	63	225903	1
	Cd	114	51.124	ug/L	0.586	1	30	563049	0
	Sb	121	50.900	ug/L	0.971	1	102	715631	0
	Sb	123	50.958	ug/L	0.807	1	72	549082	0
	Ba	135	50.546	ug/L	0.847	1	11	199395	0
	Ba	137	50.006	ug/L	0.792	1	17	340645	0
>	Tb	159		ug/L			1160798	1051076 ✓	0
	Tl	205	52.483	ug/L	0.137	0	51	1590218	0
	Pb	208	51.498	ug/L	0.261	0	139	2058738	0
	Bi	209		ug/L			2367270	2129498	0
	Th	232	52.911	ug/L	0.476	0	21	2017351	0
	U	238	53.047	ug/L	0.501	0	3	2057180	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:05:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635099 ✓	1
	Be	9	0.002	ug/L	0.001	56	5	9	24
	C	13		ug/L			58801	55687	1
	Cl	37		ug/L			3025336	3023678	0
>	Sc	45		ug/L			671354	615760 ✓	1
	V	51	0.030	ug/L	0.012	40	5156	5115	4
	V-1	51	0.005	ug/L	0.000	3	130	187	1
	Cr	52	0.097	ug/L	0.043	44	15247	15064	4
	Cr	53	0.016	ug/L	0.004	24	115	126	4
	Mn	55	0.037	ug/L	0.045	123	250	797	88
	Co	59	0.002	ug/L	0.002	82	40	65	36
>	Ge	72		ug/L			457613	436174 ✓	0
	Ni	60	0.001	ug/L	0.002	247	22	23	21
	Ni	62	0.075	ug/L	0.022	29	29	56	14
	Cu	63	0.007	ug/L	0.002	21	58	99	9
	Cu	65	0.003	ug/L	0.001	20	28	36	5
	Zn	66	0.003	ug/L	0.007	225	143	141	8
	Zn	67	0.022	ug/L	0.018	80	23	28	15
	Zn	68	0.010	ug/L	0.003	25	137	142	2
	As	75	-0.012	ug/L	0.013	107	267	237	7
	As-1	75	0.412	ug/L	0.066	16	8149	8373	0
	Se	82	0.042	ug/L	0.018	41	-5	1	170
	Se	78	1.543	ug/L	0.228	14	8278	8517	0
	Mo	98	0.007	ug/L	0.003	35	17	46	23
	Y	89		ug/L			298590	280384	1
	Kr	83		ug/L			554	512	1
>	In	115		ug/L			979916	898103 ✓	1
	Ag	107	0.002	ug/L	0.001	44	15	38	27
	Cd	111	0.006	ug/L	0.005	84	63	82	24
	Cd	114	0.002	ug/L	0.001	65	30	49	27
	Sb	121	0.054	ug/L	0.003	5	102	838	3
	Sb	123	0.053	ug/L	0.005	9	72	629	7
	Ba	135	0.013	ug/L	0.016	128	11	60	104
	Ba	137	0.010	ug/L	0.013	124	17	83	100
>	Tb	159		ug/L			1160798	1002039 ✓	0
	Tl	205	0.010	ug/L	0.005	50	51	319	43
	Pb	208	0.006	ug/L	0.006	98	139	364	65
	Bi	209		ug/L			2367270	2132633	0
	Th	232	0.087	ug/L	0.004	4	21	3194	5
	U	238	0.002	ug/L	0.002	81	3	81	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:12:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	626341	2
	Be	9	0.002	ug/L	0.002	144	5	8	54
	C	13		ug/L			58801	58031	1
	Cl	37		ug/L			3025336	3022541	1
>	Sc	45		ug/L			671354	623819	4
	V	51	0.023	ug/L	0.018	77	5156	5084	0
	V-1	51	0.004	ug/L	0.001	25	130	173	11
	Cr	52	0.079	ug/L	0.066	83	15247	15041	0
	Cr	53	0.017	ug/L	0.005	30	115	129	0
	Mn	55	0.020	ug/L	0.001	7	250	549	1
	Co	59	0.003	ug/L	0.001	34	40	71	12
>	Ge	72		ug/L			457613	435796	2
	Ni	60	0.003	ug/L	0.001	27	22	29	5
	Ni	62	0.035	ug/L	0.013	35	29	41	9
	Cu	63	0.038	ug/L	0.004	11	58	282	8
	Cu	65	0.035	ug/L	0.001	3	28	120	3
	Zn	66	0.095	ug/L	0.007	7	143	286	5
	Zn	67	0.081	ug/L	0.008	9	23	43	6
	Zn	68	0.086	ug/L	0.023	27	137	229	13
	As	75	-0.002	ug/L	0.027	1323	267	252	16
	As-1	75	0.431	ug/L	0.052	12	8149	8393	1
	Se	82	-0.001	ug/L	0.106	9193	-5	-5	326
	Se	78	1.592	ug/L	0.225	14	8278	8529	1
	Mo	98	0.001	ug/L	0.001	175	17	18	24
	Y	89		ug/L			298590	283029	2
	Kr	83		ug/L			554	542	7
>	In	115		ug/L			979916	894967	2
	Ag	107	0.001	ug/L	0.000	29	15	24	15
	Cd	111	0.001	ug/L	0.001	44	63	64	6
	Cd	114	0.000	ug/L	0.000	52	30	32	6
	Sb	121	0.013	ug/L	0.002	15	102	279	13
	Sb	123	0.015	ug/L	0.001	9	72	223	9
	Ba	135	0.009	ug/L	0.002	21	11	46	17
	Ba	137	0.008	ug/L	0.001	8	17	70	3
>	Tb	159		ug/L			1160798	992514	0
	Tl	205	0.004	ug/L	0.001	27	51	163	19
	Pb	208	0.003	ug/L	0.001	25	139	240	12
	Bi	209		ug/L			2367270	2130335	1
	Th	232	0.056	ug/L	0.008	14	21	2017	14
	U	238	0.000	ug/L	0.000	10	3	17	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:16:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	652734	2
[	Be	9	27.491	ug/L	0.079	0	5	55606	2
	C	13		ug/L			58801	56855	2
	Cl	37		ug/L			3025336	3038043	2
[>	Sc	45		ug/L			671354	633444	2
[	V	51	26.285	ug/L	0.710	2	5156	352538	1
[	V-1	51	26.420	ug/L	0.764	2	130	349307	1
[	Cr	52	26.430	ug/L	0.432	1	15247	317390	0
[	Cr	53	26.870	ug/L	0.645	2	115	34831	0
[	Mn	55	26.487	ug/L	1.009	3	250	418811	1
[	Co	59	26.465	ug/L	0.123	0	40	324870	1
[>	Ge	72		ug/L			457613	446398	0
[	Ni	60	26.648	ug/L	0.158	0	22	72106	0
[	Ni	62	27.107	ug/L	0.266	0	29	10335	1
[	Cu	63	26.636	ug/L	0.556	2	58	161834	1
[	Cu	65	27.518	ug/L	0.357	1	28	75550	1
[	Zn	66	85.447	ug/L	2.259	2	143	138301	2
[	Zn	67	79.871	ug/L	2.485	3	23	21071	2
[	Zn	68	83.115	ug/L	1.092	1	137	96814	1
[	As	75	25.998	ug/L	0.176	0	267	39453	0
[	As-1	75	26.486	ug/L	0.279	1	8149	47840	0
[	Se	82	83.066	ug/L	0.901	1	-5	13629	0
[	Se	78	84.938	ug/L	1.214	1	8278	43396	0
[	Mo	98	24.281	ug/L	0.259	1	17	105231	1
	Y	89		ug/L			298590	289391	2
	Kr	83		ug/L			554	536	3
[>	In	115		ug/L			979916	921269	0
[	Ag	107	25.250	ug/L	0.489	1	15	324433	1
[	Cd	111	26.013	ug/L	0.222	0	63	116699	0
[	Cd	114	26.128	ug/L	0.175	0	30	291394	0
[	Sb	121	25.908	ug/L	0.047	0	102	368928	0
[	Sb	123	25.910	ug/L	0.371	1	72	282730	0
[	Ba	135	26.228	ug/L	0.372	1	11	104776	1
[	Ba	137	26.300	ug/L	0.197	0	17	181427	0
[>	Tb	159		ug/L			1160798	1042846	0
[	Tl	205	28.103	ug/L	0.113	0	51	844874	0
[	Pb	208	27.602	ug/L	0.342	1	139	1094874	0
[	Bi	209		ug/L			2367270	2199658	0
[	Th	232	27.541	ug/L	0.383	1	21	1041878	1
[	U	238	27.701	ug/L	0.127	0	3	1065863	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:21:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ag, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	659810	3
	Be	**9**	**0.149**	ug/L	0.004	2	5	310	4
	C	**13**		ug/L			58801	65054	0
	Cl	**37**		ug/L			3025336	3122149	1
>	**Sc**	**45**		ug/L			671354	639983	0
	V	**51**	**6.811**	ug/L	0.144	2	5156	95961	1
	V-1	**51**	**6.880**	ug/L	0.140	2	130	92020	1
	Cr	**52**	**8.956**	ug/L	0.175	1	15247	118292	1
	Cr	**53**	**9.186**	ug/L	0.194	2	115	12106	1
	Mn	**55**	**411.530**	ug/L	13.290	3	250	6574111	2
	Co	**59**	**2.147**	ug/L	0.039	1	40	26664	1
>	**Ge**	**72**		ug/L			457613	458183	1
	Ni	**60**	**6.064**	ug/L	0.110	1	22	16857	1
	Ni	**62**	**6.423**	ug/L	0.186	2	29	2535	1
	Cu	**63**	**4.560**	ug/L	0.044	0	58	28490	2
	Cu	**65**	**4.631**	ug/L	0.051	1	28	13071	1
	Zn	**66**	**32.399**	ug/L	0.131	0	143	53919	1
	Zn	**67**	**37.328**	ug/L	0.455	1	23	10120	1
	Zn	**68**	**36.413**	ug/L	0.560	1	137	43608	1
	As	**75**	**1.929**	ug/L	0.029	1	267	3252	0
	As-1	**75**	**2.102**	ug/L	0.053	2	8149	11408	0
	Se	**82**	**0.132**	ug/L	0.077	58	-5	16	76
	Se	**78**	**0.673**	ug/L	0.162	24	8278	8575	0
	Mo	**98**	**0.111**	ug/L	0.004	3	17	508	2
	Y	**89**		ug/L			298590	314998	1
	Kr	**83**		ug/L			554	511	2
>	**In**	**115**		ug/L			979916	938320	1
	Ag	**107**	**0.026**	ug/L	0.002	6	15	349	7
	Cd	**111**	**0.614**	ug/L	0.005	0	63	2864	1
	Cd	**114**	**0.591**	ug/L	0.017	2	30	6743	1
	Sb	**121**	**0.042**	ug/L	0.003	6	102	706	7
	Sb	**123**	**0.043**	ug/L	0.003	6	72	543	6
	Ba	**135**	**118.089**	ug/L	1.203	1	11	480432	1
	Ba	**137**	**116.205**	ug/L	2.052	1	17	816284	0
>	**Tb**	**159**		ug/L			1160798	1053119	1
	Tl	**205**	**0.060**	ug/L	0.001	1	51	1882	0
	Pb	**208**	**29.278**	ug/L	0.287	0	139	1172753	0
	Bi	**209**		ug/L			2367270	2210131	0
	Th	**232**	**0.934**	ug/L	0.100	10	21	35715	10
	U	**238**	**0.101**	ug/L	0.004	3	3	3937	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:25:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~ 200x

11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	658425	1
[	Be	9	0.738	ug/L	0.017	2	5	1510	1
	C	13		ug/L			58801	91809	1
	Cl	37		ug/L			3025336	3121092	0
[>	Sc	45		ug/L			671354	708733	0
[	V	51	32.110	ug/L	0.580	1	5156	480751	0
[	V-1	51	32.027	ug/L	0.347	1	130	473892	0
[	Cr	52	42.379	ug/L	1.064	2	15247	559748	1
[	Cr	53	42.130	ug/L	0.213	0	115	61057	0
[	Mn	55	1883.119	ug/L	26.628	1	250	33314547	1
[	Co	59	9.767	ug/L	0.008	0	40	134185	0
[>	Ge	72		ug/L			457613	458066	0
[	Ni	60	30.272	ug/L	0.197	0	22	84048	0
[	Ni	62	32.351	ug/L	0.731	2	29	12651	2
[	Cu	63	22.539	ug/L	0.451	1	58	140530	1
[	Cu	65	22.870	ug/L	0.112	0	28	64435	1
[	Zn	66	153.550	ug/L	3.407	2	143	254914	1
[	Zn	67	178.161	ug/L	1.761	0	23	48204	0
[	Zn	68	169.099	ug/L	5.740	3	137	201948	2
[	As	75	9.640	ug/L	0.130	1	267	15180	0
[	As-1	75	9.784	ug/L	0.160	1	8149	23277	0
[	Se	82	<-0.006	ug/L	0.063	1126	-5	-6	169
[	Se	78	0.809	ug/L	0.102	12	8278	8631	0
[	Mo	98	0.403	ug/L	0.012	3	17	1807	2
	Y	89		ug/L			298590	394045	0
	Kr	83		ug/L			554	731	3
[>	In	115		ug/L			979916	927280	0
[	Ag	107	< 0.109	ug/L	0.005	4	15	1429	4
[	Cd	111	2.968	ug/L	0.055	1	63	13454	2
[	Cd	114	2.890	ug/L	0.040	1	30	32470	1
[	Sb	121	< 0.113	ug/L	0.003	3	102	1715	2
[	Sb	123	0.118	ug/L	0.006	5	72	1365	4
[	Ba	135	602.318	ug/L	6.484	1	11	2421603	0
[	Ba	137	592.169	ug/L	2.462	0	17	4111490	0
[>	Tb	159		ug/L			1160798	1090266	0
[	Tl	205	0.260	ug/L	0.006	2	51	8220	1
[	Pb	208	141.780	ug/L	0.982	0	139	5879097	0
[	Bi	209		ug/L			2367270	2161536	0
[	Th	232	3.575	ug/L	0.035	0	21	141404	1
[	U	238	0.489	ug/L	0.007	1	3	19667	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:29:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	660484	1
[	Be	9	0.692	ug/L	0.035	5	5	1420	3
	C	13		ug/L			58801	96600	1
	Cl	37		ug/L			3025336	3188144	1
[>	Sc	45		ug/L			671354	700601	0
[	V	51	31.403	ug/L	0.693	2	5156	464916	1
[	V-1	51	31.630	ug/L	0.860	2	130	462649	2
[	Cr	52	42.696	ug/L	0.715	1	15247	557419	1
[	Cr	53	43.465	ug/L	1.149	2	115	62263	2
[	Mn	55	1813.932	ug/L	25.407	1	250	31722585	0
[	Co	59	9.095	ug/L	0.068	0	40	123512	0
[>	Ge	72		ug/L			457613	451524	1
[	Ni	60	29.754	ug/L	0.416	1	22	81422	0
[	Ni	62	32.092	ug/L	1.039	3	29	12367	1
[	Cu	63	21.961	ug/L	0.414	1	58	134952	0
[	Cu	65	22.411	ug/L	0.507	2	28	62226	0
[	Zn	66	153.158	ug/L	2.241	1	143	250621	0
[	Zn	67	179.789	ug/L	6.313	3	23	47935	2
[	Zn	68	171.662	ug/L	2.773	1	137	202074	0
[	As	75	9.733	ug/L	0.033	0	267	15104	1
[	As-1	75	9.983	ug/L	0.131	1	8149	23247	0
[	Se	82	U 0.025	ug/L	0.019	75	-5	-1	281
[	Se	78	1.216	ug/L	0.387	31	8278	8678	0
[	Mo	98	0.411	ug/L	0.022	5	17	1819	3
	Y	89		ug/L			298590	385227	1
	Kr	83		ug/L			554	715	0
[>	In	115		ug/L			979916	930091	1
[	Ag	107	U 0.111	ug/L	0.007	6	15	1448	5
[	Cd	111	2.896	ug/L	0.068	2	63	13170	2
[	Cd	114	2.805	ug/L	0.014	0	30	31601	1
[	Sb	121	U 0.104	ug/L	0.007	6	102	1595	4
[	Sb	123	0.106	ug/L	0.005	5	72	1236	3
[	Ba	135	603.049	ug/L	9.409	1	11	2431548	0
[	Ba	137	588.890	ug/L	17.888	3	17	4099548	1
[>	Tb	159		ug/L			1160798	1091942	1
[	Tl	205	0.257	ug/L	0.002	0	51	8138	0
[	Pb	208	137.098	ug/L	1.730	1	139	5693255	0
[	Bi	209		ug/L			2367270	2134355	1
[	Th	232	3.028	ug/L	0.045	1	21	119947	0
[	U	238	0.478	ug/L	0.008	1	3	19241	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:33:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn, Ba
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	645469	1
[	Be	9	27.666	ug/L	0.170	0	5	55337	0
	C	13		ug/L			58801	83861	1
	Cl	37		ug/L			3025336	3184038	1
[>	Sc	45		ug/L			671354	697616	0
|	V	51	60.538	ug/L	0.659	1	5156	887489	0
|	V-1	51	61.562	ug/L	0.603	0	130	896527	0
|	Cr	52	73.167	ug/L	0.297	0	15247	939872	0
|	Cr	53	76.545	ug/L	0.768	1	115	109095	1
|	Mn	55	1775.803	ug/L	37.565	2	250	30921698	1
[	Co	59	33.627	ug/L	0.301	0	40	454613	0
[>	Ge	72		ug/L			457613	449956	1
|	Ni	60	58.182	ug/L	0.364	0	22	158657	1
|	Ni	62	61.318	ug/L	0.359	0	29	23528	1
|	Cu	63	48.335	ug/L	0.991	2	58	295965	2
|	Cu	65	48.901	ug/L	1.816	3	28	135259	2
|	Zn	66	228.669	ug/L	4.171	1	143	372803	0
|	Zn	67	248.745	ug/L	4.490	1	23	66093	0
|	Zn	68	246.861	ug/L	4.229	1	137	289535	0
|	As	75	34.451	ug/L	0.089	0	267	52612	1
|	As-1	75	34.846	ug/L	0.662	1	8149	60913	2
|	Se	82	77.361	ug/L	1.455	1	-5	12792	0
|	Se	78	79.279	ug/L	2.044	2	8278	41365	1
[	Mo	98	21.842	ug/L	0.580	2	17	95402	2
	Y	89		ug/L			298590	390645	0
	Kr	83		ug/L			554	764	3
[>	In	115		ug/L			979916	929781	0
|	Ag	107	21.987	ug/L	0.128	0	15	285138	0
|	Cd	111	27.484	ug/L	0.328	1	63	124443	1
|	Cd	114	27.276	ug/L	0.263	0	30	307001	0
|	Sb	121	1.604	ug/L	0.013	0	102	23137	0
|	Sb	123	1.593	ug/L	0.023	1	72	17603	0
|	Ba	135	600.886	ug/L	7.185	1	11	2422373	1
[	Ba	137	592.539	ug/L	5.461	0	17	4125010	0
[>	Tb	159		ug/L			1160798	1089659	0
|	Tl	205	26.111	ug/L	0.165	0	51	820217	0
|	Pb	208	155.382	ug/L	1.273	0	139	6439407	0
|	Bi	209		ug/L			2367270	2127905	0
|	Th	232	28.125	ug/L	0.527	1	21	1111662	1
[	U	238	26.956	ug/L	0.223	0	3	1083740	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:37:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	664283	2
[	Be	9	29.538	ug/L	0.358	1	5	60794	1
	C	13		ug/L			58801	93673	2
	Cl	37		ug/L			3025336	3208810	2
[>	Sc	45		ug/L			671354	696608	3
[	V	51	57.760	ug/L	1.117	1	5156	845461	1
[	V-1	51	58.198	ug/L	1.068	1	130	846019	1
[	Cr	52	67.373	ug/L	2.309	3	15247	864844	0
[	Cr	53	68.828	ug/L	2.146	3	115	97906	0
[	Mn	55	1909.476	ug/L	89.815	4	250	33175034	2
[	Co	59	35.805	ug/L	1.809	5	40	482853	1
[>	Ge	72		ug/L			457613	453327	1
[	Ni	60	57.563	ug/L	1.450	2	22	158108	0
[	Ni	62	59.298	ug/L	0.873	1	29	22922	0
[	Cu	63	50.597	ug/L	0.729	1	58	312108	0
[	Cu	65	51.323	ug/L	1.627	3	28	143023	1
[	Zn	66	241.533	ug/L	4.196	1	143	396728	1
[	Zn	67	258.923	ug/L	8.397	3	23	69317	3
[	Zn	68	256.723	ug/L	5.203	2	137	303346	1
[	As	75	37.743	ug/L	0.705	1	267	58039	1
[	As-1	75	38.375	ug/L	0.888	2	8149	66759	1
[	Se	82	88.120	ug/L	2.422	2	-5	14679	1
[	Se	78	90.822	ug/L	2.891	3	8278	46545	1
[	Mo	98	22.087	ug/L	0.748	3	17	97189	2
	Y	89		ug/L			298590	389286	1
	Kr	83		ug/L			554	724	5
[>	In	115		ug/L			979916	935270	0
[	Ag	107	22.990	ug/L	0.689	2	15	299932	3
[	Cd	111	30.060	ug/L	0.249	0	63	136902	1
[	Cd	114	30.117	ug/L	0.182	0	30	340979	0
[	Sb	121	22.882	ug/L	0.472	2	102	330814	2
[	Sb	123	22.452	ug/L	0.520	2	72	248751	2
[	Ba	135	619.033	ug/L	8.400	1	11	2510292	1
[	Ba	137	604.360	ug/L	9.137	1	17	4232093	1
[>	Tb	159		ug/L			1160798	1103567	0
[	Tl	205	28.747	ug/L	0.701	2	51	914623	2
[	Pb	208	166.327	ug/L	2.344	1	139	6980910	0
[	Bi	209		ug/L			2367270	2147383	0
[	Th	232	31.710	ug/L	0.458	1	21	1269491	1
[	U	238	29.697	ug/L	0.471	1	3	1209252	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:41:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	658736	3
[	Be	9	1.198	ug/L	0.029	2	5	2448	1
	C	13		ug/L			58801	82676	1
	Cl	37		ug/L			3025336	3128837	2
[>	Sc	45		ug/L			671354	710302	1
[	V	51	41.498	ug/L	1.214	2	5156	620945	1
[	V-1	51	41.904	ug/L	1.352	3	130	621179	1
[	Cr	52	29.148	ug/L	0.619	2	15247	390842	0
[	Cr	53	30.448	ug/L	1.142	3	115	44239	1
[	Mn	55	1741.837	ug/L	40.934	2	250	30878157	1
[	Co	59	11.983	ug/L	0.119	0	40	164961	0
[>	Ge	72		ug/L			457613	445188	1
[	Ni	60	20.428	ug/L	0.273	1	22	55124	0
[	Ni	62	21.533	ug/L	0.705	3	29	8191	1
[	Cu	63	17.746	ug/L	0.499	2	58	107526	1
[	Cu	65	17.873	ug/L	0.604	3	28	48933	2
[	Zn	66	221.841	ug/L	2.195	0	143	357893	1
[	Zn	67	274.253	ug/L	7.881	2	23	72089	1
[	Zn	68	262.775	ug/L	6.703	2	137	304890	0
[	As	75	13.448	ug/L	0.274	2	267	20475	1
[	As-1	75	13.677	ug/L	0.357	2	8149	28466	0
[	Se	82	U -0.098	ug/L	0.036	36	-5	-21	28
[	Se	78	1.151	ug/L	0.426	37	8278	8529	0
[	Mo	98	0.681	ug/L	0.007	0	17	2959	2
	Y	89		ug/L			298590	400439	0
	Kr	83		ug/L			554	783	1
[>	In	115		ug/L			979916	909481	1
[	Ag	107	U 0.125	ug/L	0.005	4	15	1595	3
[	Cd	111	2.066	ug/L	0.033	1	63	9204	0
[	Cd	114	1.957	ug/L	0.011	0	30	21569	1
[	Sb	121	U 0.113	ug/L	0.007	6	102	1684	5
[	Sb	123	0.117	ug/L	0.010	8	72	1326	7
[	Ba	135	1037.342	ug/L	18.539	1	11	4090096	0
[	Ba	137	1027.145	ug/L	23.355	2	17	6994160	2
[>	Tb	159		ug/L			1160798	1101185	1
[	Tl	205	0.242	ug/L	0.008	3	51	7726	2
[	Pb	208	82.938	ug/L	1.271	1	139	3473170	0
[	Bi	209		ug/L			2367270	2108586	0
[	Th	232	3.804	ug/L	0.070	1	21	151931	0
[	U	238	0.450	ug/L	0.013	2	3	18289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:46:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679095	0
	Be	9	0.996	ug/L	0.005	0	5	2101	0
	C	13		ug/L			58801	81604	2
	Cl	37		ug/L			3025336	3152565	1
>	Sc	45		ug/L			671354	720489	1
	V	51	35.318	ug/L	0.386	1	5156	537019	1
	V-1	51	35.408	ug/L	0.490	1	130	532576	1
	Cr	52	27.857	ug/L	0.466	1	15247	379635	0
	Cr	53	28.133	ug/L	0.823	2	115	41477	1
	Mn	55	935.145	ug/L	24.403	2	250	16814823	1
	Co	59	9.378	ug/L	0.169	1	40	130952	0
>	Ge	72		ug/L			457613	454787	1
	Ni	60	25.938	ug/L	1.038	4	22	71474	2
	Ni	62	27.951	ug/L	0.499	1	29	10855	1
	Cu	63	20.965	ug/L	0.543	2	58	129757	1
	Cu	65	21.178	ug/L	0.617	2	28	59230	2
	Zn	66	134.335	ug/L	1.580	1	143	221432	0
	Zn	67	155.238	ug/L	2.024	1	23	41701	0
	Zn	68	147.173	ug/L	2.502	1	137	174517	0
	As	75	9.981	ug/L	0.112	1	267	15593	0
	As-1	75	10.176	ug/L	0.279	2	8149	23709	0
	Se	82	-0.231	ug/L	0.010	4	-5	-43	3
	Se	78	1.015	ug/L	0.616	60	8278	8654	1
	Mo	98	0.323	ug/L	0.022	6	17	1443	5
	Y	89		ug/L			298590	410327	0
	Kr	83		ug/L			554	858	3
>	In	115		ug/L			979916	920415	0
	Ag	107	0.176	ug/L	0.005	2	15	2276	2
	Cd	111	1.202	ug/L	0.026	2	63	5445	1
	Cd	114	1.032	ug/L	0.007	0	30	11525	0
	Sb	121	0.060	ug/L	0.002	3	102	955	2
	Sb	123	0.061	ug/L	0.003	4	72	730	3
	Ba	135	450.552	ug/L	4.820	1	11	1798036	0
	Ba	137	443.254	ug/L	5.175	1	17	3054635	0
>	Tb	159		ug/L			1160798	1091144	0
	Tl	205	0.177	ug/L	0.002	1	51	5604	0
	Pb	208	64.259	ug/L	0.461	0	139	2666772	0
	Bi	209		ug/L			2367270	2150466	0
	Th	232	4.636	ug/L	0.085	1	21	183512	1
	U	238	0.943	ug/L	0.015	1	3	37956	0

VR33 : 00290

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:50:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669560	1
	Be	9	1.104	ug/L	0.037	3	5	2295	3
	C	13		ug/L			58801	83986	0
	Cl	37		ug/L			3025336	3077675	2
>	Sc	45		ug/L			671354	701312	0
	V	51	35.711	ug/L	0.223	0	5156	528517	0
	V-1	51	35.889	ug/L	0.267	0	130	525497	1
	Cr	52	24.080	ug/L	0.237	0	15247	321637	0
	Cr	53	24.634	ug/L	0.394	1	115	35379	1
	Mn	55	769.488	ug/L	9.718	1	250	13471579	1
	Co	59	9.244	ug/L	0.085	0	40	125661	0
>	Ge	72		ug/L			457613	450092	2
	Ni	60	29.837	ug/L	0.331	1	22	81389	1
	Ni	62	30.947	ug/L	1.270	4	29	11886	2
	Cu	63	24.449	ug/L	0.868	3	58	149705	1
	Cu	65	24.872	ug/L	0.020	0	28	68855	2
	Zn	66	136.839	ug/L	1.935	1	143	223218	1
	Zn	67	156.779	ug/L	3.352	2	23	41673	1
	Zn	68	148.239	ug/L	3.979	2	137	173950	2
	As	75	11.121	ug/L	0.231	2	267	17162	1
	As-1	75	11.368	ug/L	0.306	2	8149	25271	0
	Se	82	-0.242	ug/L	0.053	21	-5	-45	18
	Se	78	1.366	ug/L	0.520	38	8278	8712	0
	Mo	98	0.365	ug/L	0.009	2	17	1609	0
	Y	89		ug/L			298590	471766	2
	Kr	83		ug/L			554	943	4
>	In	115		ug/L			979916	918949	2
	Ag	107	0.213	ug/L	0.007	3	15	2744	0
	Cd	111	1.348	ug/L	0.051	3	63	6083	1
	Cd	114	1.176	ug/L	0.037	3	30	13105	0
	Sb	121	0.072	ug/L	0.003	3	102	1114	1
	Sb	123	0.068	ug/L	0.002	2	72	810	3
	Ba	135	426.385	ug/L	10.242	2	11	1698233	0
	Ba	137	418.457	ug/L	13.953	3	17	2877633	0
>	Tb	159		ug/L			1160798	1091122	1
	Tl	205	0.184	ug/L	0.000	0	51	5831	1
	Pb	208	75.544	ug/L	0.496	0	139	3134968	0
	Bi	209		ug/L			2367270	2115487	1
	Th	232	4.885	ug/L	0.078	1	21	193372	0
	U	238	1.635	ug/L	0.033	2	3	65806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:55:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			726304	641685 ✓	1
Be	9	54.512	ug/L	2.100	3	5	108341	2
C	13		ug/L			58801	56162	2
Cl	37		ug/L			3025336	3214467	2
> Sc	45		ug/L			671354	632166 ✓	1
V	51	49.710	ug/L	0.261	0	5156	661244	1
V-1	51	50.166	ug/L	0.458	0	130	662001	1
Cr	52	49.490	ug/L	0.989	1	15247	580581	0
Cr	53	50.983	ug/L	2.071	4	115	65847	2
Mn	55	49.976	ug/L	0.210	0	250	788852	1
Co	59	50.644	ug/L	1.932	3	40	620117	1
> Ge	72		ug/L			457613	461866 ✓	1
Ni	60	48.895	ug/L	1.551	3	22	136836	1
Ni	62	48.774	ug/L	0.969	1	29	19215	1
Cu	63	48.836	ug/L	0.554	1	58	306939	0
Cu	65	48.413	ug/L	1.406	2	28	137469	1
Zn	66	47.973	ug/L	1.152	2	143	80394	1
Zn	67	50.183	ug/L	0.804	1	23	13706	0
Zn	68	49.406	ug/L	0.573	1	137	59595	0
As	75	48.756	ug/L	0.776	1	267	76307	0
As-1	75	48.904	ug/L	0.779	1	8149	84424	0
Se	82	49.294	ug/L	1.118	2	-5	8364	1
Se	78	49.733	ug/L	1.217	2	8278	29750	0
Mo	98	45.466	ug/L	0.456	1	17	203844	0
Y	89		ug/L			298590	299481	0
Kr	83		ug/L			554	527	2
> In	115		ug/L			979916	915111 ✓	0
Ag	107	45.975	ug/L	0.468	1	15	586791	0
Cd	111	50.233	ug/L	0.563	1	63	223804	1
Cd	114	50.026	ug/L	0.450	0	30	554183	1
Sb	121	49.846	ug/L	0.359	0	102	704965	0
Sb	123	49.501	ug/L	0.417	0	72	536533	1
Ba	135	49.533	ug/L	1.026	2	11	196558	2
Ba	137	49.666	ug/L	0.337	0	17	340329	1
> Tb	159		ug/L			1160798	1036888 ✓	0
Tl	205	51.651	ug/L	0.439	0	51	1543867	0
Pb	208	50.984	ug/L	0.249	0	139	2010693	0
Bi	209		ug/L			2367270	2144029	0
Th	232	51.869	ug/L	0.105	0	21	1951035	0
U	238	53.450	ug/L	0.641	1	3	2044835	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:02:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	624890	1
	Be	9	0.001	ug/L	0.000	24	5	7	7
	C	13		ug/L			58801	58264	3
	Cl	37		ug/L			3025336	3091372	1
>	Sc	45		ug/L			671354	620879	1
	V	51	0.036	ug/L	0.009	24	5156	5231	2
	V-1	51	0.002	ug/L	0.001	73	130	145	12
	Cr	52	0.121	ug/L	0.027	22	15247	15462	1
	Cr	53	0.011	ug/L	0.012	110	115	120	11
	Mn	55	0.007	ug/L	0.003	38	250	347	13
	Co	59	0.001	ug/L	0.000	9	40	53	2
>	Ge	72		ug/L			457613	442099	0
	Ni	60	-0.001	ug/L	0.002	264	22	20	19
	Ni	62	0.053	ug/L	0.012	22	29	48	9
	Cu	63	0.005	ug/L	0.001	28	58	84	9
	Cu	65	0.001	ug/L	0.002	185	28	31	21
	Zn	66	-0.004	ug/L	0.004	115	143	132	4
	Zn	67	0.001	ug/L	0.004	685	23	23	4
	Zn	68	0.010	ug/L	0.005	49	137	143	3
	As	75	-0.010	ug/L	0.012	121	267	244	6
	As-1	75	0.401	ug/L	0.069	17	8149	8470	0
	Se	82	0.022	ug/L	0.007	32	-5	-1	75
	Se	78	1.493	ug/L	0.240	16	8278	8612	0
	Mo	98	0.006	ug/L	0.001	25	17	41	15
	Y	89		ug/L			298590	280031	0
	Kr	83		ug/L			554	529	2
>	In	115		ug/L			979916	897436	0
	Ag	107	0.002	ug/L	0.000	8	15	33	4
	Cd	111	0.002	ug/L	0.000	27	63	65	3
	Cd	114	0.001	ug/L	0.001	91	30	35	19
	Sb	121	0.050	ug/L	0.002	4	102	783	4
	Sb	123	0.050	ug/L	0.004	7	72	593	6
	Ba	135	0.003	ug/L	0.003	105	11	21	51
	Ba	137	0.003	ug/L	0.000	16	17	33	9
>	Tb	159		ug/L			1160798	990519	0
	Tl	205	0.009	ug/L	0.004	44	51	292	38
	Pb	208	0.002	ug/L	0.001	26	139	190	10
	Bi	209		ug/L			2367270	2129554	0
	Th	232	0.093	ug/L	0.005	5	21	3364	4
	U	238	0.001	ug/L	0.000	8	3	54	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	632346	0
	Be	9	0.002	ug/L	0.001	54	5	8	24
	C	13		ug/L			58801	59327	3
	Cl	37		ug/L			3025336	3058708	0
>	Sc	45		ug/L			671354	628473	0
	V	51	0.032	ug/L	0.006	18	5156	5246	1
	V-1	51	0.003	ug/L	0.000	9	130	163	2
	Cr	52	0.116	ug/L	0.013	11	15247	15588	1
	Cr	53	0.022	ug/L	0.007	32	115	136	6
	Mn	55	0.021	ug/L	0.002	11	250	569	6
	Co	59	0.004	ug/L	0.000	10	40	92	6
>	Ge	72		ug/L			457613	443392	1
	Ni	60	0.003	ug/L	0.001	44	22	29	11
	Ni	62	0.010	ug/L	0.014	136	29	32	15
	Cu	63	0.052	ug/L	0.001	1	58	369	1
	Cu	65	0.043	ug/L	0.004	9	28	145	7
	Zn	66	0.236	ug/L	0.013	5	143	516	3
	Zn	67	0.194	ug/L	0.070	36	23	73	25
	Zn	68	0.224	ug/L	0.009	3	137	391	1
	As	75	-0.001	ug/L	0.022	2450	267	258	13
	As-1	75	0.451	ug/L	0.089	19	8149	8569	0
	Se	82	0.044	ug/L	0.075	169	-5	2	585
	Se	78	1.676	ug/L	0.328	19	8278	8712	0
	Mo	98	0.002	ug/L	0.002	86	17	27	34
	Y	89		ug/L			298590	287646	1
	Kr	83		ug/L			554	537	4
>	In	115		ug/L			979916	904024	2
	Ag	107	0.001	ug/L	0.000	38	15	21	11
	Cd	111	-0.001	ug/L	0.003	380	63	55	22
	Cd	114	0.001	ug/L	0.000	52	30	36	11
	Sb	121	0.013	ug/L	0.001	7	102	273	6
	Sb	123	0.013	ug/L	0.001	3	72	211	4
	Ba	135	0.006	ug/L	0.001	17	11	33	13
	Ba	137	0.008	ug/L	0.001	14	17	70	9
>	Tb	159		ug/L			1160798	987765	1
	Tl	205	0.005	ug/L	0.002	42	51	192	33
	Pb	208	0.004	ug/L	0.001	14	139	277	7
	Bi	209		ug/L			2367270	2121511	0
	Th	232	0.071	ug/L	0.011	15	21	2552	14
	U	238	0.001	ug/L	0.000	40	3	32	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:

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Sample Date/Time: Thursday, November 15, 2012 17:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	633675	0
[	Be	9	27.347	ug/L	0.580	2	5	53700	2
	C	13		ug/L			58801	58399	3
	Cl	37		ug/L			3025336	3046858	0
[>	Sc	45		ug/L			671354	625792	1
[	V	51	25.834	ug/L	1.196	4	5156	342320	2
[	V-1	51	26.178	ug/L	1.242	4	130	341878	3
[	Cr	52	25.526	ug/L	0.437	1	15247	303332	0
[	Cr	53	26.650	ug/L	0.601	2	115	34135	0
[	Mn	55	25.752	ug/L	0.536	2	250	402478	2
[	Co	59	26.502	ug/L	0.590	2	40	321339	0
[>	Ge	72		ug/L			457613	454838	1
[	Ni	60	25.378	ug/L	0.177	0	22	69966	0
[	Ni	62	25.615	ug/L	0.566	2	29	9951	1
[	Cu	63	25.734	ug/L	0.347	1	58	159320	1
[	Cu	65	26.423	ug/L	0.159	0	28	73918	1
[	Zn	66	81.468	ug/L	1.642	2	143	134365	1
[	Zn	67	77.955	ug/L	0.044	0	23	20957	1
[	Zn	68	79.266	ug/L	1.935	2	137	94068	1
[	As	75	24.970	ug/L	0.384	1	267	38617	0
[	As-1	75	25.380	ug/L	0.404	1	8149	47044	0
[	Se	82	79.475	ug/L	0.449	0	-5	13286	0
[	Se	78	81.014	ug/L	0.512	0	8278	42554	0
[	Mo	98	22.523	ug/L	0.489	2	17	99443	1
	Y	89		ug/L			298590	289499	1
	Kr	83		ug/L			554	521	10
[>	In	115		ug/L			979916	902731	0
[	Ag	107	24.334	ug/L	0.524	2	15	306427	2
[	Cd	111	25.424	ug/L	0.279	1	63	111769	1
[	Cd	114	25.655	ug/L	0.313	1	30	280372	1
[	Sb	121	25.374	ug/L	0.154	0	102	354054	1
[	Sb	123	25.003	ug/L	0.052	0	72	267363	0
[	Ba	135	25.791	ug/L	0.320	1	11	100963	1
[	Ba	137	25.408	ug/L	0.143	0	17	171756	1
[>	Tb	159		ug/L			1160798	1014593	1
[	Tl	205	27.280	ug/L	0.461	1	51	797777	1
[	Pb	208	26.986	ug/L	0.351	1	139	1041285	0
[	Bi	209		ug/L			2367270	2144969	0
[	Th	232	26.942	ug/L	0.691	2	21	991397	1
[	U	238	27.195	ug/L	0.664	2	3	1017758	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	680889	0
[	Be	9	1.296	ug/L	0.011	0	5	2740	0
	C	13		ug/L			58801	75830	1
	Cl	37		ug/L			3025336	3113816	1
[>	Sc	45		ug/L			671354	740699 ✓	2
[	V	51	40.768	ug/L	1.728	4	5156	635966	1
[	V-1	51	41.120	ug/L	1.756	4	130	635392	1
[	Cr	52	34.202	ug/L	0.608	1	15247	475304	1
[	Cr	53	35.335	ug/L	0.543	1	115	53525	1
[	Mn	55	403.174	ug/L	9.834	2	250	7451571	0
[	Co	59	9.888	ug/L	0.333	3	40	141893	1
[>	Ge	72		ug/L			457613	461505	1
[	Ni	60	29.143	ug/L	0.561	1	22	81520	1
[	Ni	62	31.577	ug/L	0.806	2	29	12441	2
[	Cu	63	28.271	ug/L	0.247	0	58	177580	0
[	Cu	65	29.107	ug/L	0.772	2	28	82604	1
[	Zn	66	108.641	ug/L	5.015	4	143	181716	3
[	Zn	67	132.371	ug/L	3.045	2	23	36091	2
[	Zn	68	121.297	ug/L	1.737	1	137	145995	0
[	As	75	8.969	ug/L	0.188	2	267	14246	1
[	As-1	75	9.091	ug/L	0.258	2	8149	22372	0
[	Se	82	~~0.462~~	ug/L	0.133	28	-5	-83	25
[	Se	78	0.987	ug/L	0.191	19	8278	8773	0
[	Mo	98	0.336	ug/L	0.010	2	17	1520	3
	Y	89		ug/L			298590	561426	1
	Kr	83		ug/L			554	1122	2
[>	In	115		ug/L			979916	909998	0
[	Ag	107	0.265	ug/L	0.004	1	15	3378	2
[	Cd	111	0.662	ug/L	0.027	4	63	2990	3
[	Cd	114	0.355	ug/L	0.015	4	30	3938	3
[	Sb	121	~~0.051~~	ug/L	0.004	8	102	814	7
[	Sb	123	0.050	ug/L	0.005	9	72	606	7
[	Ba	135	413.310	ug/L	2.943	0	11	1630821	1
[	Ba	137	405.032	ug/L	4.058	1	17	2759699	0
[>	Tb	159		ug/L			1160798	1101527	0
[	Tl	205	~~0.152~~	ug/L	0.003	1	51	4866	1
[	Pb	208	26.132	ug/L	0.041	0	139	1094903	0
[	Bi	209		ug/L			2367270	2111347	1
[	Th	232	5.715	ug/L	0.075	1	21	228403	1
[	U	238	2.296	ug/L	0.018	0	3	93333	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	700795	1
	Be	9	1.299	ug/L	0.064	4	5	2824	4
	C	13		ug/L			58801	75246	3
	Cl	37		ug/L			3025336	3124450	0
>	Sc	45		ug/L			671354	740487	0
	V	51	40.627	ug/L	1.321	3	5156	634159	3
	V-1	51	40.838	ug/L	1.241	3	130	631411	3
	Cr	52	28.061	ug/L	0.122	0	15247	392974	0
	Cr	53	28.721	ug/L	0.468	1	115	43527	1
	Mn	55	592.016	ug/L	9.529	1	250	10943361	1
	Co	59	10.007	ug/L	0.350	3	40	143619	2
>	Ge	72		ug/L			457613	459196	0
	Ni	60	32.873	ug/L	0.439	1	22	91491	0
	Ni	62	33.926	ug/L	0.914	2	29	13298	2
	Cu	63	32.769	ug/L	1.195	3	58	204780	3
	Cu	65	33.291	ug/L	0.417	1	28	94011	0
	Zn	66	104.639	ug/L	2.018	1	143	174196	1
	Zn	67	127.613	ug/L	3.738	2	23	34619	2
	Zn	68	117.250	ug/L	2.204	1	137	140446	2
	As	75	9.680	ug/L	0.140	1	267	15278	0
	As-1	75	9.811	ug/L	0.133	1	8149	23376	0
	Se	82	-0.368	ug/L	0.112	30	-5	-67	28
	Se	78	1.121	ug/L	0.249	22	8278	8786	1
	Mo	98	0.350	ug/L	0.008	2	17	1578	2
	Y	89		ug/L			298590	617372	1
	Kr	83		ug/L			554	1123	3
>	In	115		ug/L			979916	920435	1
	Ag	107	0.382	ug/L	0.005	1	15	4921	2
	Cd	111	0.708	ug/L	0.015	2	63	3230	1
	Cd	114	0.400	ug/L	0.006	1	30	4483	0
	Sb	121	0.028	ug/L	0.002	6	102	499	5
	Sb	123	0.030	ug/L	0.002	5	72	399	3
	Ba	135	376.487	ug/L	6.978	1	11	1502270	0
	Ba	137	371.381	ug/L	3.288	0	17	2559267	0
>	Tb	159		ug/L			1160798	1096597	1
	Tl	205	0.171	ug/L	0.003	1	51	5451	1
	Pb	208	21.163	ug/L	0.422	1	139	882616	0
	Bi	209		ug/L			2367270	2087434	0
	Th	232	6.090	ug/L	0.086	1	21	242250	0
	U	238	2.787	ug/L	0.040	1	3	112736	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments: rv Be
Sample Date/Time: Thursday, November 15, 2012 17:24:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	708238	0
[	Be	9	1.202	ug/L	0.007	0	5	2644	0
	C	13		ug/L			58801	75490	0
	Cl	37		ug/L			3025336	3186111	3
[>	Sc	45		ug/L			671354	761476	1
[	V	51	36.439	ug/L	0.375	1	5156	585470	1
[	V-1	51	36.671	ug/L	0.432	1	130	583031	2
[	Cr	52	27.660	ug/L	0.533	1	15247	398537	0
[	Cr	53	28.397	ug/L	0.581	2	115	44254	1
[	Mn	55	393.048	ug/L	6.334	1	250	7470745	0
[	Co	59	9.034	ug/L	0.164	1	40	133323	0
[>	Ge	72		ug/L			457613	468129	2
[	Ni	60	25.476	ug/L	0.559	2	22	72264	0
[	Ni	62	27.265	ug/L	0.398	1	29	10899	1
[	Cu	63	34.274	ug/L	1.207	3	58	218229	0
[	Cu	65	34.660	ug/L	1.404	4	28	99712	1
[	Zn	66	94.778	ug/L	3.819	4	143	160756	1
[	Zn	67	114.160	ug/L	3.111	2	23	31566	2
[	Zn	68	102.095	ug/L	3.304	3	137	124611	1
[	As	75	7.682	ug/L	0.178	2	267	12415	1
[	As-1	75	7.808	ug/L	0.342	4	8149	20659	0
[	Se	82	-0.403	ug/L	0.077	19	-5	-74	18
[	Se	78	1.061	ug/L	0.717	67	8278	8925	0
[	Mo	98	0.256	ug/L	0.015	5	17	1178	2
	Y	89		ug/L			298590	686201	0
	Kr	83		ug/L			554	1138	4
[>	In	115		ug/L			979916	915309	0
[	Ag	107	0.636	ug/L	0.012	1	15	8134	1
[	Cd	111	0.580	ug/L	0.042	7	63	2641	7
[	Cd	114	0.270	ug/L	0.001	0	30	3019	1
[	Sb	121	0.019	ug/L	0.003	16	102	363	11
[	Sb	123	0.019	ug/L	0.003	14	72	274	10
[	Ba	135	287.199	ug/L	1.237	0	11	1139823	1
[	Ba	137	285.348	ug/L	3.697	1	17	1955464	0
[>	Tb	159		ug/L			1160798	1107662	1
[	Tl	205	0.163	ug/L	0.002	0	51	5243	1
[	Pb	208	17.874	ug/L	0.139	0	139	753104	0
[	Bi	209		ug/L			2367270	2087267	1
[	Th	232	5.707	ug/L	0.083	1	21	229309	0
[	U	238	3.097	ug/L	0.083	2	3	126574	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:

rr Bc

Sample Date/Time: Thursday, November 15, 2012 17:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	672119	1
[	Be	9	0.931	ug/L	0.032	3	5	1944	4
	C	13		ug/L			58801	77697	1
	Cl	37		ug/L			3025336	3157728	1
[>	Sc	45		ug/L			671354	693465	1
[	V	51	32.303	ug/L	0.797	2	5156	473161	1
[	V-1	51	32.381	ug/L	0.971	2	130	468746	2
[	Cr	52	21.791	ug/L	0.178	0	15247	289321	1
[	Cr	53	22.022	ug/L	0.506	2	115	31281	1
[	Mn	55	842.080	ug/L	17.824	2	250	14575171	1
[	Co	59	8.061	ug/L	0.207	2	40	108337	1
[>	Ge	72		ug/L			457613	455755	2
[	Ni	60	23.433	ug/L	0.621	2	22	64706	0
[	Ni	62	24.856	ug/L	0.365	1	29	9675	1
[	Cu	63	14.977	ug/L	0.613	4	58	92873	2
[	Cu	65	15.188	ug/L	0.674	4	28	42552	2
[	Zn	66	146.813	ug/L	4.157	2	143	242401	0
[	Zn	67	170.687	ug/L	5.126	3	23	45925	0
[	Zn	68	162.640	ug/L	4.463	2	137	193186	0
[	As	75	9.413	ug/L	0.307	3	267	14745	0
[	As-1	75	9.691	ug/L	0.394	4	8149	23006	0
[	Se	82	< -0.334	ug/L	0.102	30	-5	-61	30
[	Se	78	1.228	ug/L	0.379	30	8278	8763	1
[	Mo	98	0.345	ug/L	0.016	4	17	1540	2
	Y	89		ug/L			298590	386526	2
	Kr	83		ug/L			554	869	6
[>	In	115		ug/L			979916	923177	1
[	Ag	107	< 0.197	ug/L	0.013	6	15	2547	4
[	Cd	111	1.167	ug/L	0.009	0	63	5301	0
[	Cd	114	1.012	ug/L	0.018	1	30	11336	0
[	Sb	121	< 0.049	ug/L	0.002	4	102	790	2
[	Sb	123	0.048	ug/L	0.003	6	72	588	5
[	Ba	135	489.296	ug/L	11.355	2	11	1958089	0
[	Ba	137	471.117	ug/L	8.931	1	17	3255918	0
[>	Tb	159		ug/L			1160798	1065791	0
[	Tl	205	< 0.139	ug/L	0.001	0	51	4304	1
[	Pb	208	37.625	ug/L	0.292	0	139	1525218	0
[	Bi	209		ug/L			2367270	2113366	0
[	Th	232	4.344	ug/L	0.003	0	21	167958	1
[	U	238	0.637	ug/L	0.002	0	3	25070	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:32:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	671473	3
[	Be	9	0.843	ug/L	0.038	4	5	1757	1
	C	13		ug/L			58801	86867	0
	Cl	37		ug/L			3025336	3140166	1
[>	Sc	45		ug/L			671354	694730	1
[	V	51	32.021	ug/L	0.905	2	5156	470037	3
[	V-1	51	32.226	ug/L	0.802	2	130	467476	3
[	Cr	52	22.986	ug/L	0.414	1	15247	304821	0
[	Cr	53	23.633	ug/L	0.242	1	115	33625	1
[	Mn	55	1029.036	ug/L	28.522	2	250	17842112	1
[	Co	59	8.138	ug/L	0.093	1	40	109582	0
[>	Ge	72		ug/L			457613	456056	1
[	Ni	60	19.485	ug/L	0.386	1	22	53878	2
[	Ni	62	20.857	ug/L	0.399	1	29	8130	1
[	Cu	63	19.133	ug/L	0.265	1	58	118775	0
[	Cu	65	19.664	ug/L	0.518	2	28	55155	1
[	Zn	66	124.248	ug/L	1.230	0	143	205396	0
[	Zn	67	137.455	ug/L	2.581	1	23	37034	2
[	Zn	68	132.929	ug/L	0.967	0	137	158103	0
[	As	75	16.518	ug/L	0.204	1	267	25704	0
[	As-1	75	16.805	ug/L	0.211	1	8149	33977	0
[	Se	82	~~-0.045~~	ug/L	0.060	133	-5	-12	78
[	Se	78	1.270	ug/L	0.069	5	8278	8789	0
[	Mo	98	0.451	ug/L	0.022	4	17	2014	3
	Y	89		ug/L			298590	392096	0
	Kr	83		ug/L			554	730	2
[>	In	115		ug/L			979916	931241	1
[	Ag	107	~~0.093~~	ug/L	0.001	1	15	1219	1
[	Cd	111	1.679	ug/L	0.023	1	63	7669	0
[	Cd	114	1.608	ug/L	0.026	1	30	18149	1
[	Sb	121	~~0.080~~	ug/L	0.003	4	102	1250	3
[	Sb	123	0.082	ug/L	0.001	1	72	975	0
[	Ba	135	277.351	ug/L	1.315	0	11	1119821	1
[	Ba	137	277.746	ug/L	4.533	1	17	1936313	0
[>	Tb	159		ug/L			1160798	1083148	1
[	Tl	205	~~0.160~~	ug/L	0.005	3	51	5038	3
[	Pb	208	70.984	ug/L	1.056	1	139	2923951	0
[	Bi	209		ug/L			2367270	2126716	0
[	Th	232	4.078	ug/L	0.043	1	21	160235	0
[	U	238	0.771	ug/L	0.005	0	3	30806	1

VR33 : 00300

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	694379	0
[	Be	9	0.751	ug/L	0.033	4	5	1620	3
	C	13		ug/L			58801	79704	1
	Cl	37		ug/L			3025336	3116892	1
[>	Sc	45		ug/L			671354	701369	1
[	V	51	27.606	ug/L	0.484	1	5156	409771	1
[	V-1	51	27.572	ug/L	0.352	1	130	403749	0
[	Cr	52	22.339	ug/L	0.214	0	15247	299539	0
[	Cr	53	22.216	ug/L	0.271	1	115	31922	2
[	Mn	55	1610.403	ug/L	40.654	2	250	28194174	2
[	Co	59	8.784	ug/L	0.167	1	40	119427	2
[>	Ge	72		ug/L			457613	461954	2
[	Ni	60	24.177	ug/L	0.955	3	22	67666	1
[	Ni	62	25.807	ug/L	0.637	2	29	10181	0
[	Cu	63	16.297	ug/L	0.360	2	58	102464	0
[	Cu	65	16.633	ug/L	0.360	2	28	47256	0
[	Zn	66	131.048	ug/L	2.974	2	143	219400	1
[	Zn	67	139.946	ug/L	2.376	1	23	38184	0
[	Zn	68	135.161	ug/L	5.380	3	137	162755	2
[	As	75	20.708	ug/L	0.772	3	267	32561	1
[	As-1	75	20.912	ug/L	0.866	4	8149	40802	1
[	Se	82	-0.135	ug/L	0.063	46	-5	-28	36
[	Se	78	0.924	ug/L	0.366	39	8278	8752	0
[	Mo	98	0.382	ug/L	0.007	1	17	1730	1
	Y	89		ug/L			298590	383834	1
	Kr	83		ug/L			554	773	2
[>	In	115		ug/L			979916	933212	0
[	Ag	107	0.124	ug/L	0.003	2	15	1633	1
[	Cd	111	1.604	ug/L	0.050	3	63	7344	3
[	Cd	114	1.524	ug/L	0.019	1	30	17245	1
[	Sb	121	0.098	ug/L	0.004	4	102	1511	3
[	Sb	123	0.101	ug/L	0.003	2	72	1184	3
[	Ba	135	273.149	ug/L	4.551	1	11	1105199	1
[	Ba	137	270.730	ug/L	4.598	1	17	1891580	1
[>	Tb	159		ug/L			1160798	1075202	0
[	Tl	205	0.197	ug/L	0.004	2	51	6155	1
[	Pb	208	87.323	ug/L	0.925	1	139	3570933	0
[	Bi	209		ug/L			2367270	2155438	2
[	Th	232	4.326	ug/L	0.025	0	21	168766	1
[	U	238	0.533	ug/L	0.003	0	3	21133	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:41:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	670867	2
[	Be	9	0.738	ug/L	0.012	1	5	1540	2
	C	13		ug/L			58801	79897	1
	Cl	37		ug/L			3025336	3116504	1
[>	Sc	45		ug/L			671354	679830	1
[	V	51	26.498	ug/L	0.881	3	5156	381349	1
[	V-1	51	26.510	ug/L	0.807	3	130	376173	1
[	Cr	52	18.562	ug/L	0.849	4	15247	243759	2
[	Cr	53	18.583	ug/L	0.614	3	115	25889	1
[	Mn	55	958.176	ug/L	37.090	3	250	16253319	2
[	Co	59	6.810	ug/L	0.176	2	40	89721	0
[>	Ge	72		ug/L			457613	458129	1
[	Ni	60	18.894	ug/L	0.523	2	22	52467	1
[	Ni	62	20.510	ug/L	0.126	0	29	8033	1
[	Cu	63	15.229	ug/L	0.111	0	58	94983	0
[	Cu	65	15.195	ug/L	0.210	1	28	42824	0
[	Zn	66	143.187	ug/L	2.413	1	143	237746	0
[	Zn	67	147.734	ug/L	2.713	1	23	39978	0
[	Zn	68	143.250	ug/L	2.043	1	137	171145	1
[	As	75	12.043	ug/L	0.209	1	267	18898	0
[	As-1	75	12.266	ug/L	0.268	2	8149	27115	0
[	Se	82	-0.050	ug/L	0.042	83	-5	-13	51
[	Se	78	0.991	ug/L	0.252	25	8278	8710	0
[	Mo	98	0.462	ug/L	0.015	3	17	2071	3
	Y	89		ug/L			298590	383395	1
	Kr	83		ug/L			554	704	0
[>	In	115		ug/L			979916	915967	0
[	Ag	107	0.167	ug/L	0.004	2	15	2144	2
[	Cd	111	1.604	ug/L	0.027	1	63	7211	2
[	Cd	114	1.464	ug/L	0.022	1	30	16260	1
[	Sb	121	0.097	ug/L	0.002	2	102	1466	1
[	Sb	123	0.097	ug/L	0.004	4	72	1115	3
[	Ba	135	206.064	ug/L	2.171	1	11	818418	1
[	Ba	137	204.119	ug/L	1.458	0	17	1399955	1
[>	Tb	159		ug/L			1160798	1068230	1
[	Tl	205	0.157	ug/L	0.003	2	51	4870	0
[	Pb	208	63.303	ug/L	1.438	2	139	2571448	0
[	Bi	209		ug/L			2367270	2124075	1
[	Th	232	4.069	ug/L	0.050	1	21	157697	0
[	U	238	1.456	ug/L	0.043	2	3	57384	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:45:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

cr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	660319	1
[	Be	9	0.716	ug/L	0.017	2	5	1468	1
	C	13		ug/L			58801	88005	0
	Cl	37		ug/L			3025336	3087078	1
[>	Sc	45		ug/L			671354	689069	1
[	V	51	22.560	ug/L	0.653	2	5156	330014	3
[	V-1	51	22.581	ug/L	0.587	2	130	324907	2
[	Cr	52	14.376	ug/L	0.180	1	15247	194971	1
[	Cr	53	14.425	ug/L	0.630	4	115	20398	3
[	Mn	55	1281.819	ug/L	61.348	4	250	22041800	3
[	Co	59	5.869	ug/L	0.124	2	40	78400	1
[>	Ge	72		ug/L			457613	458567	0
[	Ni	60	12.877	ug/L	0.231	1	22	35802	0
[	Ni	62	14.204	ug/L	0.259	1	29	5577	2
[	Cu	63	13.976	ug/L	0.209	1	58	87260	1
[	Cu	65	14.244	ug/L	0.332	2	28	40180	1
[	Zn	66	146.951	ug/L	2.181	1	143	244235	0
[	Zn	67	161.885	ug/L	4.186	2	23	43848	2
[	Zn	68	160.306	ug/L	1.892	1	137	191684	0
[	As	75	10.226	ug/L	0.187	1	267	16103	1
[	As-1	75	10.489	ug/L	0.231	2	8149	24393	0
[	Se	82	~0.098	ug/L	0.040	40	-5	11	60
[	Se	78	1.156	ug/L	0.214	18	8278	8789	0
[	Mo	98	0.245	ug/L	0.002	0	17	1106	0
	Y	89		ug/L			298590	386451	1
	Kr	83		ug/L			554	631	2
[>	In	115		ug/L			979916	929731	1
[	Ag	107	~0.076	ug/L	0.003	3	15	1004	4
[	Cd	111	1.949	ug/L	0.018	0	63	8879	0
[	Cd	114	1.914	ug/L	0.009	0	30	21572	0
[	Sb	121	~0.159	ug/L	0.001	0	102	2374	0
[	Sb	123	0.159	ug/L	0.006	3	72	1816	4
[	Ba	135	402.337	ug/L	6.590	1	11	1621745	0
[	Ba	137	392.873	ug/L	2.875	0	17	2734942	1
[>	Tb	159		ug/L			1160798	1071071	0
[	Tl	205	~0.169	ug/L	0.004	2	51	5267	2
[	Pb	208	80.066	ug/L	1.147	1	139	3261789	1
[	Bi	209		ug/L			2367270	2139069	0
[	Th	232	3.880	ug/L	0.017	0	21	150777	0
[	U	238	0.816	ug/L	0.006	0	3	32234	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:50:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	630489	2
	Be	9	55.409	ug/L	2.659	4	5	108178	2
	C	13		ug/L			58801	56806	2
	Cl	37		ug/L			3025336	3107422	2
>	Sc	45		ug/L			671354	636488	2
	V	51	50.167	ug/L	1.179	2	5156	671704	1
	V-1	51	50.537	ug/L	1.446	2	130	671321	1
	Cr	52	49.571	ug/L	0.854	1	15247	585565	1
	Cr	53	50.780	ug/L	1.486	2	115	66046	1
	Mn	55	50.043	ug/L	1.042	2	250	795117	0
	Co	59	50.727	ug/L	1.022	2	40	625522	0
>	Ge	72		ug/L			457613	459912	2
	Ni	60	48.098	ug/L	3.142	6	22	133953	4
	Ni	62	48.361	ug/L	0.890	1	29	18973	2
	Cu	63	48.371	ug/L	1.746	3	58	302613	1
	Cu	65	48.398	ug/L	1.546	3	28	136817	1
	Zn	66	48.938	ug/L	1.314	2	143	81652	1
	Zn	67	50.299	ug/L	0.751	1	23	13679	0
	Zn	68	49.441	ug/L	1.120	2	137	59372	0
	As	75	48.536	ug/L	1.180	2	267	75627	0
	As-1	75	48.938	ug/L	1.371	2	8149	84100	0
	Se	82	49.238	ug/L	0.882	1	-5	8319	0
	Se	78	50.574	ug/L	1.465	2	8278	29979	0
	Mo	98	44.653	ug/L	1.521	3	17	199314	2
	Y	89		ug/L			298590	294878	1
	Kr	83		ug/L			554	514	4
>	In	115		ug/L			979916	897000	1
	Ag	107	45.764	ug/L	1.181	2	15	572511	2
	Cd	111	50.813	ug/L	0.367	0	63	221917	1
	Cd	114	51.319	ug/L	0.263	0	30	557214	0
	Sb	121	50.554	ug/L	0.771	1	102	700774	0
	Sb	123	50.626	ug/L	0.466	0	72	537823	0
	Ba	135	50.130	ug/L	0.290	0	11	194968	0
	Ba	137	49.652	ug/L	0.382	0	17	333490	1
>	Tb	159		ug/L			1160798	1008137	0
	Tl	205	52.166	ug/L	0.690	1	51	1515994	1
	Pb	208	51.438	ug/L	0.232	0	139	1972384	0
	Bi	209		ug/L			2367270	2078769	1
	Th	232	52.422	ug/L	0.200	0	21	1917120	0
	U	238	53.884	ug/L	0.653	1	3	2004301	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	625174 ✓	1
	Be	9	-0.000	ug/L	0.001	948	5	4	44
	C	13		ug/L			58801	57806	0
	Cl	37		ug/L			3025336	3032251	0
>	Sc	45		ug/L			671354	603951 ✓	1
	V	51	0.037	ug/L	0.010	26	5156	5100	2
	V-1	51	-0.000	ug/L	0.001	19207	130	117	9
	Cr	52	0.125	ug/L	0.026	20	15247	15083	2
	Cr	53	0.005	ug/L	0.006	121	115	110	8
	Mn	55	0.011	ug/L	0.005	47	250	396	18
	Co	59	0.002	ug/L	0.001	46	40	60	17
>	Ge	72		ug/L			457613	436976 ✓	1
	Ni	60	-0.001	ug/L	0.001	119	22	19	12
	Ni	62	0.061	ug/L	0.032	52	29	51	22
	Cu	63	0.005	ug/L	0.002	42	58	83	14
	Cu	65	0.003	ug/L	0.001	34	28	34	8
	Zn	66	-0.007	ug/L	0.012	184	143	126	16
	Zn	67	0.015	ug/L	0.024	164	23	26	22
	Zn	68	0.007	ug/L	0.003	41	137	138	3
	As	75	0.004	ug/L	0.004	93	267	261	3
	As-1	75	0.511	ug/L	0.067	13	8149	8534	1
	Se	82	0.027	ug/L	0.020	74	-5	0	408
	Se	78	1.836	ug/L	0.246	13	8278	8652	1
	Mo	98	0.006	ug/L	0.001	22	17	43	14
	Y	89		ug/L			298590	275379	1
	Kr	83		ug/L			554	518	1
>	In	115		ug/L			979916	872475 ✓	1
	Ag	107	0.001	ug/L	0.000	24	15	27	11
	Cd	111	0.003	ug/L	0.001	34	63	69	5
	Cd	114	0.001	ug/L	0.001	105	30	39	34
	Sb	121	0.053	ug/L	0.002	4	102	807	5
	Sb	123	0.054	ug/L	0.002	4	72	618	5
	Ba	135	0.003	ug/L	0.002	62	11	22	32
	Ba	137	0.003	ug/L	0.000	13	17	37	6
>	Tb	159		ug/L			1160798	958815 ✓	0
	Tl	205	0.010	ug/L	0.004	43	51	316	38
	Pb	208	0.002	ug/L	0.001	33	139	189	12
	Bi	209		ug/L			2367270	2055581	0
	Th	232	0.093	ug/L	0.005	5	21	3244	4
	U	238	0.001	ug/L	0.000	26	3	53	23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:02:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				617808	1
	Be	9		ug/L				9	77
	C	13		ug/L				57054	3
	Cl	37		ug/L				3021538	0
>	Sc	45		ug/L				603049	0
	V	51		ug/L				5204	0
	V-1	51		ug/L				161	45
	Cr	52		ug/L				15338	1
	Cr	53		ug/L				120	12
	Mn	55		ug/L				851	107
	Co	59		ug/L				76	21
>	Ge	72		ug/L				436831	1
	Ni	60		ug/L				19	53
	Ni	62		ug/L				34	17
	Cu	63		ug/L				79	18
	Cu	65		ug/L				33	8
	Zn	66		ug/L				137	18
	Zn	67		ug/L				26	15
	Zn	68		ug/L				127	12
	As	75		ug/L				255	5
	As-1	75		ug/L				8509	0
	Se	82		ug/L				6	162
	Se	78		ug/L				8644	0
	Mo	98		ug/L				14	60
	Y	89		ug/L				278872	2
	Kr	83		ug/L				509	5
>	In	115		ug/L				878990	1
	Ag	107		ug/L				24	70
	Cd	111		ug/L				66	14
	Cd	114		ug/L				45	35
	Sb	121		ug/L				270	12
	Sb	123		ug/L				194	7
	Ba	135		ug/L				45	122
	Ba	137		ug/L				76	120
>	Tb	159		ug/L				958896	1
	Tl	205		ug/L				228	44
	Pb	208		ug/L				272	74
	Bi	209		ug/L				2065247	0
	Th	232		ug/L				1210	4
	U	238		ug/L				68	126

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:06:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	616607	3
	Be	9	55.330	ug/L	1.709	3	9	105657	0
	C	13		ug/L			57054	53840	4
	Cl	37		ug/L			3021538	3172000	4
>	Sc	45		ug/L			603049	621016	3
	V	51	50.756	ug/L	1.831	3	5204	663165	0
	V-1	51	51.064	ug/L	1.713	3	161	661567	1
	Cr	52	50.239	ug/L	2.243	4	15338	579986	0
	Cr	53	51.248	ug/L	1.657	3	120	65027	1
	Mn	55	50.798	ug/L	1.864	3	851	787652	0
	Co	59	51.174	ug/L	1.941	3	76	615329	0
>	Ge	72		ug/L			436831	448760	1
	Ni	60	49.263	ug/L	1.727	3	19	133940	2
	Ni	62	48.858	ug/L	1.088	2	34	18708	1
	Cu	63	48.863	ug/L	0.420	0	79	298420	0
	Cu	65	49.434	ug/L	1.210	2	33	136392	1
	Zn	66	50.157	ug/L	0.152	0	137	81677	1
	Zn	67	50.782	ug/L	1.078	2	26	13480	1
	Zn	68	50.525	ug/L	0.420	0	127	59212	1
	As	75	49.336	ug/L	0.381	0	255	75030	1
	As-1	75	49.336	ug/L	0.698	1	8509	83438	1
	Se	82	49.758	ug/L	0.380	0	6	8216	1
	Se	78	49.741	ug/L	1.322	2	8644	29670	0
	Mo	98	44.752	ug/L	0.239	0	14	194959	1
	Y	89		ug/L			278872	290428	1
	Kr	83		ug/L			509	534	7
>	In	115		ug/L			878990	885081	1
	Ag	107	43.687	ug/L	0.189	0	24	539310	1
	Cd	111	50.922	ug/L	0.370	0	66	219439	1
	Cd	114	50.288	ug/L	0.539	1	45	538788	1
	Sb	121	50.806	ug/L	0.676	1	270	695101	0
	Sb	123	49.938	ug/L	0.618	1	194	523591	0
	Ba	135	50.434	ug/L	0.596	1	45	193573	0
	Ba	137	49.702	ug/L	0.841	1	76	329439	1
>	Tb	159		ug/L			958896	993709	2
	Tl	205	52.637	ug/L	0.743	1	228	1507736	0
	Pb	208	51.215	ug/L	1.075	2	272	1935325	0
	Bi	209		ug/L			2065247	2040778	1
	Th	232	52.632	ug/L	0.843	1	1210	1898089	0
	U	238	53.915	ug/L	1.105	2	68	1976336	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:13:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	612926 ✓	0
	Be	9	-0.000	ug/L	0.003	2252	9	8	73
	C	13		ug/L			57054	55989	2
	Cl	37		ug/L			3021538	3095799	0
>	Sc	45		ug/L			603049	595688 ✓	2
	V	51	-0.006	ug/L	0.014	251	5204	5066	1
	V-1	51	-0.002	ug/L	0.001	30	161	133	8
	Cr	52	-0.009	ug/L	0.043	468	15338	15044	0
	Cr	53	0.003	ug/L	0.006	204	120	122	8
	Mn	55	-0.036	ug/L	0.001	3	851	300	9
	Co	59	-0.000	ug/L	0.001	536	76	72	20
>	Ge	72		ug/L			436831	437663 ✓	1
	Ni	60	-0.002	ug/L	0.002	151	19	15	37
	Ni	62	0.061	ug/L	0.020	32	34	57	14
	Cu	63	-0.000	ug/L	0.001	581	79	78	8
	Cu	65	-0.003	ug/L	0.001	36	33	25	8
	Zn	66	-0.007	ug/L	0.008	115	137	125	9
	Zn	67	-0.027	ug/L	0.018	67	26	19	25
	Zn	68	0.005	ug/L	0.013	272	127	132	12
	As	75	-0.010	ug/L	0.008	76	255	241	3
	As-1	75	0.018	ug/L	0.125	693	8509	8550	1
	Se	82	-0.025	ug/L	0.055	218	6	2	399
	Se	78	0.090	ug/L	0.429	476	8644	8696	0
	Mo	98	0.013	ug/L	0.011	87	14	67	68
	Y	89		ug/L			278872	285551	1
	Kr	83		ug/L			509	517	5
>	In	115		ug/L			878990	867554 ✓	1
	Ag	107	0.004	ug/L	0.007	179	24	68	116
	Cd	111	0.004	ug/L	0.008	182	66	83	38
	Cd	114	0.003	ug/L	0.007	234	45	73	91
	Sb	121	0.049	ug/L	0.008	17	270	920	11
	Sb	123	0.050	ug/L	0.007	14	194	706	9
	Ba	135	-0.006	ug/L	0.005	76	45	21	85
	Ba	137	-0.006	ug/L	0.005	82	76	38	76
>	Tb	159		ug/L			958896	961137 ✓	0
	Tl	205	0.006	ug/L	0.006	102	228	385	41
	Pb	208	-0.002	ug/L	0.002	118	272	209	37
	Bi	209		ug/L			2065247	2044194	0
	Th	232	0.078	ug/L	0.004	4	1210	3945	4
	U	238	0.001	ug/L	0.001	207	68	90	49

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:18:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	639890	2
[	Be	9	0.180	ug/L	0.014	7	9	366	8
	C	13		ug/L			57054	63148	2
	Cl	37		ug/L			3021538	3015037	3
[>	Sc	45		ug/L			603049	641133	1
[	V	51	5.733	ug/L	0.122	2	5204	82322	3
[	V-1	51	5.821	ug/L	0.108	1	161	78068	2
[	Cr	52	6.570	ug/L	0.114	1	15338	92566	2
[	Cr	53	6.857	ug/L	0.112	1	120	9099	1
[	Mn	55	248.177	ug/L	8.136	3	851	3972359	2
[	Co	59	1.902	ug/L	0.063	3	76	23711	3
[>	Ge	72		ug/L			436831	460097	1
[	Ni	60	6.496	ug/L	0.053	0	19	18131	0
[	Ni	62	6.641	ug/L	0.166	2	34	2639	3
[	Cu	63	3.638	ug/L	0.044	1	79	22862	2
[	Cu	65	3.720	ug/L	0.148	3	33	10554	3
[	Zn	66	44.584	ug/L	0.830	1	137	74453	2
[	Zn	67	47.057	ug/L	1.139	2	26	12812	3
[	Zn	68	46.143	ug/L	0.552	1	127	55460	2
[	As	75	3.306	ug/L	0.016	0	255	5405	1
[	As-1	75	3.070	ug/L	0.072	2	8509	13727	0
[	Se	82	< 0.037	ug/L	0.056	148	6	12	72
[	Se	78	-0.822	ug/L	0.328	39	8644	8751	0
[	Mo	98	0.100	ug/L	0.005	5	14	462	4
	Y	89		ug/L			278872	324242	1
	Kr	83		ug/L			509	538	0
[>	In	115		ug/L			878990	917242	0
[	Ag	107	0.034	ug/L	0.001	2	24	463	3
[	Cd	111	0.462	ug/L	0.004	0	66	2134	1
[	Cd	114	0.433	ug/L	0.012	2	45	4850	3
[	Sb	121	< 0.016	ug/L	0.003	18	270	510	9
[	Sb	123	0.017	ug/L	0.003	16	194	384	8
[	Ba	135	82.687	ug/L	1.728	2	45	328910	2
[	Ba	137	81.131	ug/L	1.610	1	76	557337	2
[>	Tb	159		ug/L			958896	1030736	0
[	Tl	205	< 0.037	ug/L	0.003	9	228	1347	8
[	Pb	208	12.607	ug/L	0.253	2	272	494530	2
[	Bi	209		ug/L			2065247	2140804	0
[	Th	232	1.210	ug/L	0.030	2	1210	46545	2
[	U	238	0.145	ug/L	0.003	2	68	5587	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:22:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	661214	1
[	Be	9	0.891	ug/L	0.054	6	9	1835	5
	C	13		ug/L			57054	80072	5
	Cl	37		ug/L			3021538	3187636	3
[>	Sc	45		ug/L			603049	705496	0
[	V	51	25.758	ug/L	0.167	0	5204	385673	1
[	V-1	51	25.897	ug/L	0.204	0	161	381541	1
[	Cr	52	30.350	ug/L	0.541	1	15338	405557	1
[	Cr	53	30.815	ug/L	0.448	1	120	44506	1
[	Mn	55	1079.796	ug/L	20.740	1	851	19015205	1
[	Co	59	8.537	ug/L	0.102	1	76	116810	2
[>	Ge	72		ug/L			436831	455024	2
[	Ni	60	31.745	ug/L	0.853	2	19	87518	0
[	Ni	62	33.010	ug/L	0.326	0	34	12828	2
[	Cu	63	17.622	ug/L	0.602	3	79	109135	1
[	Cu	65	18.202	ug/L	0.321	1	33	50940	0
[	Zn	66	210.322	ug/L	4.463	2	137	346721	0
[	Zn	67	226.685	ug/L	2.147	0	26	60934	3
[	Zn	68	217.996	ug/L	3.300	1	127	258555	0
[	As	75	16.254	ug/L	0.224	1	255	25238	1
[	As-1	75	16.010	ug/L	0.377	2	8509	33435	0
[	Se	82	-0.271	ug/L	0.132	48	6	-38	54
[	Se	78	-0.620	ug/L	0.555	89	8644	8738	0
[	Mo	98	0.510	ug/L	0.008	1	14	2269	3
	Y	89		ug/L			278872	424122	1
	Kr	83		ug/L			509	843	4
[>	In	115		ug/L			878990	914187	1
[	Ag	107	0.172	ug/L	0.007	3	24	2223	2
[	Cd	111	2.203	ug/L	0.072	3	66	9871	3
[	Cd	114	2.073	ug/L	0.012	0	45	22988	1
[	Sb	121	0.067	ug/L	0.006	9	270	1226	7
[	Sb	123	0.068	ug/L	0.002	3	194	939	1
[	Ba	135	418.950	ug/L	2.768	0	45	1660660	1
[	Ba	137	410.624	ug/L	6.362	1	76	2810733	1
[>	Tb	159		ug/L			958896	1077726	0
[	Tl	205	0.188	ug/L	0.001	0	228	6089	0
[	Pb	208	59.595	ug/L	0.142	0	272	2443071	0
[	Bi	209		ug/L			2065247	2134406	0
[	Th	232	5.631	ug/L	0.023	0	1210	221502	0
[	U	238	0.702	ug/L	0.006	0	68	28002	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:26:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	656179	1
	Be	**9**	**0.904**	ug/L	0.062	6	9	1846	5
	C	**13**		ug/L			57054	78922	3
	Cl	**37**		ug/L			3021538	3149823	2
>	**Sc**	**45**		ug/L			603049	692661	1
	V	**51**	**29.486**	ug/L	0.737	2	5204	432545	2
	V-1	**51**	**29.793**	ug/L	0.610	2	161	430877	1
	Cr	**52**	**29.958**	ug/L	0.249	0	15338	393269	1
	Cr	**53**	**30.964**	ug/L	0.460	1	120	43906	1
	Mn	**55**	**1003.489**	ug/L	28.393	2	851	17347594	1
	Co	**59**	**8.706**	ug/L	0.237	2	76	116924	2
>	**Ge**	**72**		ug/L			436831	449419	2
	Ni	**60**	**31.845**	ug/L	1.517	4	19	86679	2
	Ni	**62**	**34.021**	ug/L	0.501	1	34	13055	1
	Cu	**63**	**17.730**	ug/L	0.178	1	79	108487	1
	Cu	**65**	**18.178**	ug/L	0.573	3	33	50236	0
	Zn	**66**	**204.494**	ug/L	4.836	2	137	332938	0
	Zn	**67**	**217.911**	ug/L	2.990	1	26	57839	1
	Zn	**68**	**212.768**	ug/L	4.228	1	127	249223	0
	As	**75**	**15.373**	ug/L	0.677	4	255	23579	1
	As-1	**75**	**15.274**	ug/L	0.825	5	8509	31895	1
	Se	**82**	**-0.244**	ug/L	0.037	15	6	-33	15
	Se	**78**	**-0.075**	ug/L	0.552	731	8644	8858	0
	Mo	**98**	**0.546**	ug/L	0.017	3	14	2396	2
	Y	**89**		ug/L			278872	426007	1
	Kr	**83**		ug/L			509	830	2
>	**In**	**115**		ug/L			878990	921088	1
	Ag	**107**	**0.165**	ug/L	0.004	2	24	2145	1
	Cd	**111**	**2.002**	ug/L	0.059	2	66	9042	1
	Cd	**114**	**1.882**	ug/L	0.027	1	45	21027	0
	Sb	**121**	**0.056**	ug/L	0.001	2	270	1087	2
	Sb	**123**	**0.054**	ug/L	0.001	1	194	788	1
	Ba	**135**	**383.623**	ug/L	5.036	1	45	1531978	0
	Ba	**137**	**379.538**	ug/L	5.375	1	76	2617351	0
>	**Tb**	**159**		ug/L			958896	1071181	1
	Tl	**205**	**0.180**	ug/L	0.003	1	228	5826	0
	Pb	**208**	**54.650**	ug/L	0.785	1	272	2226420	0
	Bi	**209**		ug/L			2065247	2100698	1
	Th	**232**	**5.819**	ug/L	0.109	1	1210	227402	0
	U	**238**	**0.681**	ug/L	0.010	1	68	26996	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:30:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	665415	2
[	Be	9	26.774	ug/L	0.780	2	9	55190	0
	C	13		ug/L			57054	71221	1
	Cl	37		ug/L			3021538	3070987	3
[>	Sc	45		ug/L			603049	699358	2
[	V	51	55.618	ug/L	2.745	4	5204	817909	2
[	V-1	51	56.011	ug/L	2.566	4	161	817231	2
[	Cr	52	56.087	ug/L	1.275	2	15338	727745	2
[	Cr	53	57.371	ug/L	0.323	0	120	82018	2
[	Mn	55	1049.967	ug/L	31.200	2	851	18322632	0
[	Co	59	33.510	ug/L	0.954	2	76	454013	0
[>	Ge	72		ug/L			436831	461836	1
[	Ni	60	56.296	ug/L	0.203	0	19	157567	0
[	Ni	62	57.449	ug/L	0.598	1	34	22634	0
[	Cu	63	42.232	ug/L	0.528	1	79	265471	1
[	Cu	65	42.020	ug/L	0.210	0	33	119346	1
[	Zn	66	269.443	ug/L	2.808	1	137	450894	0
[	Zn	67	282.952	ug/L	2.287	0	26	77184	1
[	Zn	68	283.399	ug/L	4.306	1	127	341155	0
[	As	75	39.077	ug/L	0.718	1	255	61210	1
[	As-1	75	38.859	ug/L	0.535	1	8509	69543	0
[	Se	82	74.037	ug/L	0.740	0	6	12578	0
[	Se	78	73.866	ug/L	0.519	0	8644	40918	1
[	Mo	98	20.168	ug/L	0.390	1	14	90418	1
	Y	89		ug/L			278872	432510	0
	Kr	83		ug/L			509	844	3
[>	In	115		ug/L			878990	908843	0
[	Ag	107	21.379	ug/L	0.301	1	24	271019	1
[	Cd	111	27.019	ug/L	0.340	1	66	119590	1
[	Cd	114	26.722	ug/L	0.464	1	45	294006	1
[	Sb	121	1.284	ug/L	0.008	0	270	18307	1
[	Sb	123	1.267	ug/L	0.011	0	194	13842	0
[	Ba	135	417.476	ug/L	6.309	1	45	1645202	1
[	Ba	137	413.365	ug/L	2.872	0	76	2812964	0
[>	Tb	159		ug/L			958896	1077683	0
[	Tl	205	25.188	ug/L	0.180	0	228	782728	0
[	Pb	208	80.699	ug/L	0.530	0	272	3308011	0
[	Bi	209		ug/L			2065247	2080469	0
[	Th	232	32.137	ug/L	0.105	0	1210	1257725	0
[	U	238	26.584	ug/L	0.313	1	68	1057156	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:34:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			617808	664429	2
⌊	Be	9	27.706	ug/L	1.450	5	9	57003	2
	C	13		ug/L			57054	78997	0
	Cl	37		ug/L			3021538	3183423	0
⌈>	Sc	45		ug/L			603049	697871	4
|	V	51	49.080	ug/L	1.426	2	5204	720918	2
|	V-1	51	49.523	ug/L	1.791	3	161	720828	1
|	Cr	52	53.272	ug/L	2.332	4	15338	689945	1
|	Cr	53	54.731	ug/L	3.737	6	120	77935	2
|	Mn	55	1087.992	ug/L	39.935	3	851	18934618	0
⌊	Co	59	32.198	ug/L	1.861	5	76	434786	1
⌈>	Ge	72		ug/L			436831	447471	0
|	Ni	60	57.664	ug/L	0.598	1	19	156375	0
|	Ni	62	57.868	ug/L	1.416	2	34	22088	1
|	Cu	63	42.279	ug/L	0.626	1	79	257483	0
|	Cu	65	43.677	ug/L	0.965	2	33	120179	1
|	Zn	66	289.984	ug/L	2.084	0	137	470218	1
|	Zn	67	293.612	ug/L	0.444	0	26	77597	0
|	Zn	68	296.692	ug/L	6.923	2	127	346040	1
|	As	75	42.257	ug/L	0.578	1	255	64114	0
|	As-1	75	41.744	ug/L	0.529	1	8509	71740	1
|	Se	82	82.625	ug/L	1.009	1	6	13600	0
|	Se	78	81.406	ug/L	0.798	0	8644	42790	1
⌊	Mo	98	24.092	ug/L	0.558	2	14	104647	1
	Y	89		ug/L			278872	412249	0
	Kr	83		ug/L			509	819	3
⌈>	In	115		ug/L			878990	910642	1
|	Ag	107	22.960	ug/L	0.625	2	24	291574	1
|	Cd	111	27.932	ug/L	0.361	1	66	123861	0
|	Cd	114	27.555	ug/L	0.531	1	45	303741	1
|	Sb	121	24.720	ug/L	0.251	1	270	348119	0
|	Sb	123	24.301	ug/L	0.240	0	194	262260	1
|	Ba	135	423.194	ug/L	2.141	0	45	1671012	1
⌊	Ba	137	422.360	ug/L	7.180	1	76	2879593	1
⌈>	Tb	159		ug/L			958896	1055026	2
|	Tl	205	26.460	ug/L	0.752	2	228	804674	0
|	Pb	208	84.912	ug/L	1.613	1	272	3406590	0
|	Bi	209		ug/L			2065247	2067427	2
|	Th	232	31.766	ug/L	0.597	1	1210	1216784	0
⌊	U	238	27.521	ug/L	0.860	3	68	1071031	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:39:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

r Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	675414	3
[	**Be**	**9**	**0.542**	ug/L	0.030	5	9	1143	2
	C	**13**		ug/L			57054	86880	1
	Cl	**37**		ug/L			3021538	3193829	2
[>	**Sc**	**45**		ug/L			603049	696641	2
[	**V**	**51**	**26.327**	ug/L	0.648	2	5204	388939	1
[	**V-1**	**51**	**26.439**	ug/L	0.638	2	161	384464	1
[	**Cr**	**52**	**16.570**	ug/L	0.341	2	15338	226612	1
[	**Cr**	**53**	**16.912**	ug/L	0.304	1	120	24176	1
[	**Mn**	**55**	**1303.681**	ug/L	57.982	4	851	22652062	1
[	**Co**	**59**	**6.709**	ug/L	0.135	2	76	90621	1
[>	**Ge**	**72**		ug/L			436831	456270	0
[	**Ni**	**60**	**13.392**	ug/L	0.107	0	19	37046	0
[	**Ni**	**62**	**14.435**	ug/L	0.308	2	34	5645	2
[	**Cu**	**63**	**16.488**	ug/L	0.147	0	79	102445	1
[	**Cu**	**65**	**16.761**	ug/L	0.560	3	33	47048	3
[	**Zn**	**66**	**266.483**	ug/L	4.305	1	137	440579	1
[	**Zn**	**67**	**262.136**	ug/L	3.983	1	26	70639	0
[	**Zn**	**68**	**273.469**	ug/L	1.994	0	127	325283	1
[	**As**	**75**	**17.506**	ug/L	0.109	0	255	27240	0
[	**As-1**	**75**	**17.276**	ug/L	0.110	0	8509	35483	0
[	**Se**	**82**	**-0.032**	ug/L	0.056	176	6	1	803
[	**Se**	**78**	**-0.644**	ug/L	0.199	30	8644	8755	1
[	**Mo**	**98**	**0.415**	ug/L	0.012	2	14	1854	3
	Y	**89**		ug/L			278872	382056	0
	Kr	**83**		ug/L			509	680	1
[>	**In**	**115**		ug/L			878990	960013	0
[	**Ag**	**107**	**0.112**	ug/L	0.007	5	24	1522	5
[	**Cd**	**111**	**5.082**	ug/L	0.027	0	66	23818	0
[	**Cd**	**114**	**5.124**	ug/L	0.075	1	45	59585	1
[	**Sb**	**121**	**0.367**	ug/L	0.008	2	270	5741	2
[	**Sb**	**123**	**0.360**	ug/L	0.006	1	194	4305	1
[	**Ba**	**135**	**332.012**	ug/L	2.481	0	45	1381993	0
[	**Ba**	**137**	**330.181**	ug/L	7.446	2	76	2373308	1
[>	**Tb**	**159**		ug/L			958896	1068088	0
[	**Tl**	**205**	**0.327**	ug/L	0.005	1	228	10328	1
[	**Pb**	**208**	**238.573**	ug/L	1.715	0	272	9691575	0
[	**Bi**	**209**		ug/L			2065247	2168153	0
[	**Th**	**232**	**5.576**	ug/L	0.049	0	1210	217380	0
[	**U**	**238**	**0.520**	ug/L	0.004	0	68	20581	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:43:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	665043	1
[	Be	9	0.759	ug/L	0.026	3	9	1573	4
	C	13		ug/L			57054	83568	1
	Cl	37		ug/L			3021538	3116959	1
[>	Sc	45		ug/L			603049	691985	2
[	V	51	24.848	ug/L	0.604	2	5204	364978	0
[	V-1	51	25.010	ug/L	0.850	3	161	361223	1
[	Cr	52	21.536	ug/L	0.149	0	15338	287366	2
[	Cr	53	22.060	ug/L	0.912	4	120	31271	2
[	Mn	55	738.989	ug/L	21.750	2	851	12759774	0
[	Co	59	6.675	ug/L	0.231	3	76	89536	0
[>	Ge	72		ug/L			436831	456752	0
[	Ni	60	20.317	ug/L	0.307	1	19	56253	1
[	Ni	62	21.587	ug/L	0.184	0	34	8434	0
[	Cu	63	18.348	ug/L	0.245	1	79	114109	1
[	Cu	65	18.519	ug/L	0.315	1	33	52039	1
[	Zn	66	86.660	ug/L	0.684	0	137	143530	0
[	Zn	67	105.288	ug/L	2.289	2	26	28422	2
[	Zn	68	96.403	ug/L	0.238	0	127	114872	0
[	As	75	6.826	ug/L	0.121	1	255	10795	1
[	As-1	75	6.592	ug/L	0.098	1	8509	19057	0
[	Se	82	u -0.161	ug/L	0.037	23	6	-20	30
[	Se	78	-0.566	ug/L	0.084	14	8644	8797	0
[	Mo	98	0.349	ug/L	0.004	1	14	1563	1
	Y	89		ug/L			278872	439261	1
	Kr	83		ug/L			509	780	6
[>	In	115		ug/L			878990	907986	0
[	Ag	107	0.131	ug/L	0.005	3	24	1688	4
[	Cd	111	0.709	ug/L	0.015	2	66	3204	2
[	Cd	114	0.591	ug/L	0.016	2	45	6540	2
[	Sb	121	u 0.048	ug/L	0.000	0	270	948	0
[	Sb	123	0.049	ug/L	0.005	10	194	727	6
[	Ba	135	329.117	ug/L	6.643	2	45	1295678	1
[	Ba	137	325.155	ug/L	1.741	0	76	2210619	0
[>	Tb	159		ug/L			958896	1061463	0
[	Tl	205	u 0.138	ug/L	0.004	2	228	4466	2
[	Pb	208	32.415	ug/L	0.287	0	272	1308875	0
[	Bi	209		ug/L			2065247	2108698	0
[	Th	232	5.728	ug/L	0.064	1	1210	221892	0
[	U	238	1.196	ug/L	0.017	1	68	46916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:47:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	652724	1
	Be	**9**	**0.498**	ug/L	0.010	1	9	1017	0
	C	**13**		ug/L			57054	80677	2
	Cl	**37**		ug/L			3021538	3121012	0
>	**Sc**	**45**		ug/L			603049	683577	1
	V	**51**	**18.200**	ug/L	0.341	1	5204	265743	1
	V-1	**51**	**18.293**	ug/L	0.413	2	161	261161	1
	Cr	**52**	**12.225**	ug/L	0.142	1	15338	168657	1
	Cr	**53**	**12.514**	ug/L	0.190	1	120	17592	0
	Mn	**55**	**1093.742**	ug/L	11.264	1	851	18665780	2
	Co	**59**	**4.802**	ug/L	0.018	0	76	63698	0
>	**Ge**	**72**		ug/L			436831	461143	1
	Ni	**60**	**13.477**	ug/L	0.144	1	19	37679	1
	Ni	**62**	**14.269**	ug/L	0.268	1	34	5639	1
	Cu	**63**	**10.156**	ug/L	0.391	3	79	63786	2
	Cu	**65**	**10.545**	ug/L	0.260	2	33	29926	1
	Zn	**66**	**148.411**	ug/L	0.698	0	137	248057	0
	Zn	**67**	**166.297**	ug/L	2.464	1	26	45299	0
	Zn	**68**	**162.948**	ug/L	3.309	2	127	195909	1
	As	**75**	**6.130**	ug/L	0.091	1	255	9815	0
	As-1	**75**	**5.833**	ug/L	0.179	3	8509	18056	0
	Se	**82**	**-0.101**	ug/L	0.089	87	6	-10	141
	Se	**78**	**-0.925**	ug/L	0.321	34	8644	8726	0
	Mo	**98**	**0.311**	ug/L	0.005	1	14	1405	2
	Y	**89**		ug/L			278872	373026	1
	Kr	**83**		ug/L			509	683	5
>	**In**	**115**		ug/L			878990	932356	1
	Ag	**107**	**0.123**	ug/L	0.003	2	24	1625	3
	Cd	**111**	**1.453**	ug/L	0.049	3	66	6662	2
	Cd	**114**	**1.370**	ug/L	0.004	0	45	15511	1
	Sb	**121**	**0.051**	ug/L	0.001	2	270	1028	1
	Sb	**123**	**0.054**	ug/L	0.002	4	194	800	3
	Ba	**135**	**419.789**	ug/L	2.337	0	45	1697017	0
	Ba	**137**	**413.188**	ug/L	13.083	3	76	2883882	2
>	**Tb**	**159**		ug/L			958896	1051314	1
	Tl	**205**	**0.144**	ug/L	0.001	1	228	4628	0
	Pb	**208**	**66.661**	ug/L	1.078	1	272	2665360	0
	Bi	**209**		ug/L			2065247	2137223	1
	Th	**232**	**3.789**	ug/L	0.059	1	1210	145806	0
	U	**238**	**0.460**	ug/L	0.008	1	68	17899	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:52:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag, V, Cr, Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	668100	0
[	Be	9	0.969	ug/L	0.018	1	9	2015	2
	C	13		ug/L			57054	86720	1
	Cl	37		ug/L			3021538	3117146	1
[>	Sc	45		ug/L			603049	727232	1
[	V	51	34.773	ug/L	0.481	1	5204	534469	1
[	V-1	51	35.084	ug/L	0.393	1	161	532744	1
[	Cr	52	60.790	ug/L	1.365	2	15338	818683	1
[	Cr	53	61.867	ug/L	0.665	1	120	91959	0
[	Mn	55	1306.034	ug/L	18.637	1	851	23709508	1
[	Co	59	10.865	ug/L	0.145	1	76	153185	0
[>	Ge	72		ug/L			436831	452436	1
[	Ni	60	57.991	ug/L	1.085	1	19	158982	0
[	Ni	62	61.884	ug/L	0.114	0	34	23884	1
[	Cu	63	22.498	ug/L	0.696	3	79	138536	1
[	Cu	65	22.506	ug/L	0.110	0	33	62636	1
[	Zn	66	282.766	ug/L	6.666	2	137	463488	1
[	Zn	67	295.755	ug/L	4.246	1	26	79037	2
[	Zn	68	297.704	ug/L	7.854	2	127	351024	1
[	As	75	15.755	ug/L	0.446	2	255	24331	2
[	As-1	75	15.538	ug/L	0.544	3	8509	32526	1
[	Se	82	u -0.270	ug/L	0.071	26	6	-38	31
[	Se	78	-0.617	ug/L	0.590	95	8644	8690	1
[	Mo	98	0.483	ug/L	0.019	3	14	2134	2
	Y	89		ug/L			278872	395486	1
	Kr	83		ug/L			509	786	1
[>	In	115		ug/L			878990	911151	0
[	Ag	107	0.162	ug/L	0.002	1	24	2080	0
[	Cd	111	4.159	ug/L	0.027	0	66	18515	1
[	Cd	114	4.070	ug/L	0.036	0	45	44932	0
[	Sb	121	u 0.046	ug/L	0.001	2	270	934	2
[	Sb	123	0.050	ug/L	0.003	5	194	738	3
[	Ba	135	467.691	ug/L	5.446	1	45	1847758	1
[	Ba	137	460.990	ug/L	1.948	0	76	3145110	0
[>	Tb	159		ug/L			958896	1067974	0
[	Tl	205	0.240	ug/L	0.004	1	228	7656	0
[	Pb	208	180.359	ug/L	0.915	0	272	7325986	0
[	Bi	209		ug/L			2065247	2097628	0
[	Th	232	5.726	ug/L	0.066	1	1210	223154	0
[	U	238	0.564	ug/L	0.013	2	68	22307	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:56:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

nr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	667594	1
	Be	9	0.531	ug/L	0.006	1	9	1109	1
	C	13		ug/L			57054	83532	4
	Cl	37		ug/L			3021538	3176588	2
>	Sc	45		ug/L			603049	687264 ✓	2
	V	51	18.989	ug/L	0.642	3	5204	278399	1
	V-1	51	19.100	ug/L	0.600	3	161	274053	1
	Cr	52	12.526	ug/L	0.407	3	15338	173261	1
	Cr	53	12.874	ug/L	0.271	2	120	18188	0
	Mn	55	1034.710	ug/L	6.483	0	851	17751854	1
	Co	59	4.966	ug/L	0.130	2	76	66201	0
>	Ge	72		ug/L			436831	460712	1
	Ni	60	11.570	ug/L	0.256	2	19	32313	1
	Ni	62	12.796	ug/L	0.454	3	34	5055	2
	Cu	63	10.473	ug/L	0.231	2	79	65716	0
	Cu	65	10.520	ug/L	0.338	3	33	29819	1
	Zn	66	130.355	ug/L	2.877	2	137	217647	1
	Zn	67	142.595	ug/L	2.220	1	26	38809	1
	Zn	68	135.644	ug/L	2.996	2	127	162931	0
	As	75	13.043	ug/L	0.350	2	255	20555	0
	As-1	75	12.848	ug/L	0.436	3	8509	28938	0
	Se	82	∿-0.030	ug/L	0.053	174	6	1	675
	Se	78	-0.533	ug/L	0.440	82	8644	8886	0
	Mo	98	0.416	ug/L	0.009	2	14	1873	1
	Y	89		ug/L			278872	376401	2
	Kr	83		ug/L			509	669	2
>	In	115		ug/L			878990	927294	1
	Ag	107	0.088	ug/L	0.004	4	24	1167	2
	Cd	111	1.668	ug/L	0.021	1	66	7598	0
	Cd	114	1.571	ug/L	0.033	2	45	17676	1
	Sb	121	∿0.093	ug/L	0.006	6	270	1622	4
	Sb	123	0.095	ug/L	0.009	9	194	1243	6
	Ba	135	292.135	ug/L	6.007	2	45	1174384	0
	Ba	137	293.978	ug/L	2.247	0	76	2041337	2
>	Tb	159		ug/L			958896	1062277	1
	Tl	205	∿0.151	ug/L	0.005	2	228	4869	1
	Pb	208	74.996	ug/L	1.175	1	272	3029963	0
	Bi	209		ug/L			2065247	2146678	0
	Th	232	4.984	ug/L	0.143	2	1210	193370	1
	U	238	0.628	ug/L	0.013	1	68	24676	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:00:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	622127 ✓	1
	Be	9	55.023	ug/L	0.404	0	9	106084	1
	C	13		ug/L			57054	56636	2
	Cl	37		ug/L			3021538	3084122	0
>	Sc	45		ug/L			603049	637033 ✓	0
	V	51	49.171	ug/L	0.719	1	5204	659752	1
	V-1	51	49.706	ug/L	0.712	1	161	661068	1
	Cr	52	49.569	ug/L	0.205	0	15338	587860	1
	Cr	53	51.322	ug/L	0.302	0	120	66849	0
	Mn	55	48.994	ug/L	1.108	2	851	780068	2
	Co	59	50.318	ug/L	0.704	1	76	621209	1
>	Ge	72		ug/L			436831	448026 ✓	1
	Ni	60	48.909	ug/L	1.333	2	19	132773	1
	Ni	62	48.932	ug/L	1.491	3	34	18707	3
	Cu	63	49.609	ug/L	1.000	2	79	302503	2
	Cu	65	49.436	ug/L	0.699	1	33	136187	0
	Zn	66	50.375	ug/L	1.295	2	137	81911	3
	Zn	67	51.577	ug/L	0.958	1	26	13669	1
	Zn	68	50.823	ug/L	0.639	1	127	59464	1
	As	75	49.934	ug/L	0.541	1	255	75812	1
	As-1	75	49.902	ug/L	0.566	1	8509	84158	1
	Se	82	50.689	ug/L	0.615	1	6	8356	1
	Se	78	50.583	ug/L	0.893	1	8644	29974	0
	Mo	98	45.686	ug/L	0.858	1	14	198668	0
	Y	89		ug/L			278872	293801	1
	Kr	83		ug/L			509	548	1
>	In	115		ug/L			878990	891368 ✓	1
	Ag	107	44.611	ug/L	1.417	3	24	554663	3
	Cd	111	50.809	ug/L	0.815	1	66	220479	1
	Cd	114	50.505	ug/L	0.875	1	45	544878	0
	Sb	121	50.313	ug/L	0.848	1	270	693204	1
	Sb	123	50.325	ug/L	0.735	1	194	531411	1
	Ba	135	50.278	ug/L	0.937	1	45	194325	0
	Ba	137	49.569	ug/L	0.756	1	76	330853	0
>	Tb	159		ug/L			958896	1005356 ✓	1
	Tl	205	51.592	ug/L	1.482	2	228	1495090	2
	Pb	208	50.711	ug/L	0.953	1	272	1938910	0
	Bi	209		ug/L			2065247	2074045	1
	Th	232	51.931	ug/L	0.564	1	1210	1894960	0
	U	238	52.825	ug/L	1.228	2	68	1959116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	624563 ✓	3
	Be	9	-0.002	ug/L	0.001	67	9	5	47
	C	13		ug/L			57054	58796	3
	Cl	37		ug/L			3021538	3039274	0
>	Sc	45		ug/L			603049	606912 ✓	1
	V	51	-0.002	ug/L	0.008	342	5204	5207	0
	V-1	51	-0.003	ug/L	0.003	103	161	129	28
	Cr	52	0.003	ug/L	0.027	1022	15338	15463	0
	Cr	53	0.002	ug/L	0.006	365	120	123	7
	Mn	55	-0.019	ug/L	0.021	106	851	566	56
	Co	59	-0.000	ug/L	0.002	880	76	74	33
>	Ge	72		ug/L			436831	435709 ✓	0
	Ni	60	0.005	ug/L	0.004	84	19	33	34
	Ni	62	0.035	ug/L	0.024	69	34	47	19
	Cu	63	0.002	ug/L	0.004	192	79	91	25
	Cu	65	0.000	ug/L	0.004	2557	33	33	30
	Zn	66	0.021	ug/L	0.027	125	137	170	25
	Zn	67	-0.014	ug/L	0.030	214	26	23	33
	Zn	68	0.020	ug/L	0.034	168	127	149	26
	As	75	0.008	ug/L	0.029	376	255	266	16
	As-1	75	0.043	ug/L	0.047	109	8509	8550	1
	Se	82	-0.003	ug/L	0.068	2146	6	5	190
	Se	78	0.173	ug/L	0.187	107	8644	8692	1
	Mo	98	0.007	ug/L	0.002	35	14	42	23
	Y	89		ug/L			278872	279515	1
	Kr	83		ug/L			509	534	5
>	In	115		ug/L			878990	870478 ✓	1
	Ag	107	0.001	ug/L	0.001	83	24	38	28
	Cd	111	-0.001	ug/L	0.002	218	66	61	13
	Cd	114	-0.001	ug/L	0.001	166	45	36	32
	Sb	121	0.039	ug/L	0.003	7	270	789	6
	Sb	123	0.042	ug/L	0.004	8	194	624	5
	Ba	135	-0.002	ug/L	0.005	255	45	37	48
	Ba	137	-0.001	ug/L	0.006	750	76	69	58
>	Tb	159		ug/L			958896	946388 ✓	0
	Tl	205	0.003	ug/L	0.005	166	228	301	41
	Pb	208	-0.001	ug/L	0.002	323	272	247	28
	Bi	209		ug/L			2065247	2058186	2
	Th	232	0.061	ug/L	0.005	8	1210	3282	6
	U	238	-0.000	ug/L	0.001	310	68	58	51

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:11:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

n Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	620054	1
	Be	9	0.003	ug/L	0.004	160	9	14	58
	C	13		ug/L			57054	62399	4
	Cl	37		ug/L			3021538	3090649	0
>	Sc	45		ug/L			603049	617754	1
	V	51	< 0.001	ug/L	0.018	2001	5204	5340	2
	V-1	51	0.001	ug/L	0.010	683	161	183	69
	Cr	52	< -0.005	ug/L	0.042	843	15338	15650	1
	Cr	53	-0.003	ug/L	0.008	261	120	119	9
	Mn	55	0.117	ug/L	0.221	189	851	2663	127
	Co	59	< 0.004	ug/L	0.006	144	76	128	56
>	Ge	72		ug/L			436831	435872	0
	Ni	60	< 0.006	ug/L	0.008	146	19	35	64
	Ni	62	0.006	ug/L	0.008	146	34	36	8
	Cu	63	< 0.015	ug/L	0.005	35	79	166	18
	Cu	65	0.017	ug/L	0.006	34	33	77	20
	Zn	66	< 0.236	ug/L	0.027	11	137	510	8
	Zn	67	0.194	ug/L	0.072	37	26	76	24
	Zn	68	0.233	ug/L	0.041	17	127	391	12
	As	75	< 0.003	ug/L	0.013	406	255	259	7
	As-1	75	0.146	ug/L	0.033	22	8509	8705	0
	Se	82	< -0.035	ug/L	0.102	293	6	0	2289
	Se	78	0.547	ug/L	0.093	17	8644	8847	0
	Mo	98	0.002	ug/L	0.002	101	14	22	37
	Y	89		ug/L			278872	286809	0
	Kr	83		ug/L			509	542	6
>	In	115		ug/L			878990	883860	0
	Ag	107	0.002	ug/L	0.003	150	24	48	74
	Cd	111	< 0.003	ug/L	0.002	70	66	80	11
	Cd	114	0.001	ug/L	0.003	233	45	60	58
	Sb	121	< 0.002	ug/L	0.006	305	270	299	28
	Sb	123	0.004	ug/L	0.006	170	194	235	29
	Ba	135	0.034	ug/L	0.058	170	45	177	126
	Ba	137	0.029	ug/L	0.053	181	76	272	130
>	Tb	159		ug/L			958896	971400	0
	Tl	205	< 0.003	ug/L	0.007	260	228	307	64
	Pb	208	< 0.018	ug/L	0.021	116	272	947	82
	Bi	209		ug/L			2065247	2091724	0
	Th	232	0.051	ug/L	0.011	21	1210	3005	13
	U	238	0.001	ug/L	0.005	350	68	116	140

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:16:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637177	1
	Be	9	27.746	ug/L	0.182	0	9	54791	2
	C	13		ug/L			57054	59693	0
	Cl	37		ug/L			3021538	3042109	3
>	Sc	45		ug/L			603049	628614	1
	V	51	25.376	ug/L	0.041	0	5204	338631	1
	V-1	51	25.518	ug/L	0.098	0	161	334978	0
	Cr	52	25.556	ug/L	0.163	0	15338	306802	0
	Cr	53	26.020	ug/L	0.554	2	120	33500	1
	Mn	55	25.683	ug/L	0.640	2	851	403911	2
	Co	59	25.930	ug/L	0.028	0	76	315938	1
>	Ge	72		ug/L			436831	445162	1
	Ni	60	25.555	ug/L	0.561	2	19	68952	2
	Ni	62	25.622	ug/L	0.155	0	34	9750	1
	Cu	63	26.070	ug/L	0.372	1	79	157981	0
	Cu	65	26.586	ug/L	0.635	2	33	72785	1
	Zn	66	82.824	ug/L	3.099	3	137	133675	2
	Zn	67	76.468	ug/L	2.835	3	26	20120	2
	Zn	68	81.568	ug/L	2.335	2	127	94730	1
	As	75	24.851	ug/L	0.258	1	255	37618	0
	As-1	75	24.922	ug/L	0.596	2	8509	46100	1
	Se	82	79.897	ug/L	1.241	1	6	13083	0
	Se	78	80.307	ug/L	1.827	2	8644	42107	0
	Mo	98	22.397	ug/L	0.317	1	14	96787	0
	Y	89		ug/L			278872	291807	2
	Kr	83		ug/L			509	539	1
>	In	115		ug/L			878990	902557	1
	Ag	107	22.924	ug/L	0.462	2	24	288557	0
	Cd	111	24.972	ug/L	0.625	2	66	109753	1
	Cd	114	24.824	ug/L	0.470	1	45	271215	1
	Sb	121	24.852	ug/L	0.264	1	270	346865	0
	Sb	123	24.675	ug/L	0.527	2	194	263903	1
	Ba	135	25.342	ug/L	0.503	1	45	99209	1
	Ba	137	25.067	ug/L	0.489	1	76	169450	0
>	Tb	159		ug/L			958896	985357	0
	Tl	205	27.321	ug/L	0.153	0	228	776267	0
	Pb	208	27.023	ug/L	0.263	0	272	1012974	0
	Bi	209		ug/L			2065247	2118823	0
	Th	232	26.735	ug/L	0.520	1	1210	956859	1
	U	238	27.094	ug/L	0.337	1	68	985089	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:20:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	661620	1
[	Be	9	0.571	ug/L	0.025	4	9	1179	3
	C	13		ug/L			57054	78067	1
	Cl	37		ug/L			3021538	3081139	2
[>	Sc	45		ug/L			603049	684121	3
	V	51	22.772	ug/L	0.457	2	5204	331172	1
	V-1	51	22.970	ug/L	0.491	2	161	328029	1
	Cr	52	15.871	ug/L	0.654	4	15338	213801	1
	Cr	53	16.503	ug/L	0.744	4	120	23154	1
	Mn	55	713.947	ug/L	29.223	4	851	12182391	0
[	Co	59	5.301	ug/L	0.219	4	76	70299	0
[>	Ge	72		ug/L			436831	468592	2
	Ni	60	13.049	ug/L	0.354	2	19	37061	0
	Ni	62	14.537	ug/L	0.705	4	34	5836	3
	Cu	63	10.546	ug/L	0.202	1	79	67308	0
	Cu	65	11.027	ug/L	0.160	1	33	31798	1
	Zn	66	84.842	ug/L	2.196	2	137	144111	0
	Zn	67	93.890	ug/L	1.089	1	26	26005	2
	Zn	68	89.803	ug/L	3.154	3	127	109734	1
	As	75	7.220	ug/L	0.106	1	255	11698	1
	As-1	75	6.945	ug/L	0.218	3	8509	20104	1
	Se	82	-0.090	ug/L	0.060	67	6	-8	116
	Se	78	-0.796	ug/L	0.393	49	8644	8923	0
[	Mo	98	0.350	ug/L	0.009	2	14	1606	2
	Y	89		ug/L			278872	404829	2
	Kr	83		ug/L			509	718	0
[>	In	115		ug/L			878990	920986	1
	Ag	107	0.073	ug/L	0.006	7	24	968	5
	Cd	111	0.685	ug/L	0.045	6	66	3139	4
	Cd	114	0.598	ug/L	0.012	1	45	6717	0
	Sb	121	0.059	ug/L	0.007	11	270	1124	7
	Sb	123	0.063	ug/L	0.009	13	194	887	9
	Ba	135	214.642	ug/L	3.774	1	45	857051	1
[	Ba	137	211.558	ug/L	5.020	2	76	1458544	0
[>	Tb	159		ug/L			958896	1041421	0
	Tl	205	0.151	ug/L	0.007	4	228	4795	4
	Pb	208	52.188	ug/L	0.316	0	272	2067388	0
	Bi	209		ug/L			2065247	2127321	0
	Th	232	5.435	ug/L	0.077	1	1210	206630	1
[	U	238	0.786	ug/L	0.012	1	68	30262	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:24:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	669928	1
[	**Be**	**9**	**0.536**	ug/L	0.022	4	9	1122	3
	C	**13**		ug/L			57054	83548	2
	Cl	**37**		ug/L			3021538	3125573	1
[>	**Sc**	**45**		ug/L			603049	699386	1
[	**V**	**51**	**19.592**	ug/L	0.216	1	5204	292259	1
[	**V-1**	**51**	**19.639**	ug/L	0.150	0	161	286888	1
[	**Cr**	**52**	**13.286**	ug/L	0.465	3	15338	186005	3
[	**Cr**	**53**	**13.425**	ug/L	0.174	1	120	19300	1
[	**Mn**	**55**	**826.523**	ug/L	27.862	3	851	14427328	2
[	**Co**	**59**	**4.621**	ug/L	0.077	1	76	62715	1
[>	**Ge**	**72**		ug/L			436831	460122	0
[	**Ni**	**60**	**11.961**	ug/L	0.407	3	19	33374	3
[	**Ni**	**62**	**13.230**	ug/L	0.040	0	34	5221	0
[	**Cu**	**63**	**9.634**	ug/L	0.034	0	79	60396	0
[	**Cu**	**65**	**10.019**	ug/L	0.164	1	33	28378	1
[	**Zn**	**66**	**59.464**	ug/L	1.703	2	137	99255	2
[	**Zn**	**67**	**74.523**	ug/L	1.159	1	26	20272	1
[	**Zn**	**68**	**68.100**	ug/L	0.753	1	127	81785	1
[	**As**	**75**	**4.577**	ug/L	0.064	1	255	7381	1
[	**As-1**	**75**	**4.365**	ug/L	0.127	2	8509	15739	1
[	**Se**	**82**	**-0.115**	ug/L	0.062	53	6	-12	81
[	**Se**	**78**	**-0.557**	ug/L	0.257	46	8644	8866	1
[	**Mo**	**98**	**0.356**	ug/L	0.002	0	14	1603	0
	Y	**89**		ug/L			278872	397073	1
	Kr	**83**		ug/L			509	721	3
[>	**In**	**115**		ug/L			878990	922652	1
[	**Ag**	**107**	**0.081**	ug/L	0.002	2	24	1072	3
[	**Cd**	**111**	**0.468**	ug/L	0.013	2	66	2171	2
[	**Cd**	**114**	**0.410**	ug/L	0.011	2	45	4630	1
[	**Sb**	**121**	**0.031**	ug/L	0.002	7	270	722	3
[	**Sb**	**123**	**0.034**	ug/L	0.006	16	194	571	9
[	**Ba**	**135**	**234.694**	ug/L	3.143	1	45	938848	0
[	**Ba**	**137**	**239.625**	ug/L	2.929	1	76	1655343	0
[>	**Tb**	**159**		ug/L			958896	1065594	1
[	**Tl**	**205**	**0.109**	ug/L	0.005	4	228	3608	2
[	**Pb**	**208**	**21.591**	ug/L	0.482	2	272	875095	0
[	**Bi**	**209**		ug/L			2065247	2134801	0
[	**Th**	**232**	**4.798**	ug/L	0.086	1	1210	186771	0
[	**U**	**238**	**0.760**	ug/L	0.022	2	68	29937	1

VR33 : 00324

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:28:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	657865	0
[	Be	9	0.538	ug/L	0.026	4	9	1106	5
	C	13		ug/L			57054	72184	1
	Cl	37		ug/L			3021538	3073208	1
[>	Sc	45		ug/L			603049	676726	1
[	V	51	21.170	ug/L	0.626	2	5204	305009	1
[	V-1	51	21.332	ug/L	0.594	2	161	301438	2
[	Cr	52	14.128	ug/L	0.531	3	15338	190222	1
[	Cr	53	14.643	ug/L	0.290	1	120	20353	0
[	Mn	55	294.629	ug/L	9.357	3	851	4976355	1
[	Co	59	4.970	ug/L	0.048	0	76	65264	2
[>	Ge	72		ug/L			436831	457772	1
[	Ni	60	12.163	ug/L	0.489	4	19	33751	2
[	Ni	62	13.276	ug/L	0.422	3	34	5212	3
[	Cu	63	11.692	ug/L	0.305	2	79	72897	1
[	Cu	65	11.791	ug/L	0.422	3	33	33212	2
[	Zn	66	43.020	ug/L	1.000	2	137	71471	1
[	Zn	67	51.921	ug/L	0.666	1	26	14060	1
[	Zn	68	47.739	ug/L	1.263	2	127	57068	1
[	As	75	3.181	ug/L	0.037	1	255	5186	2
[	As-1	75	3.012	ug/L	0.047	1	8509	13570	1
[	Se	82	~0.085	ug/L	0.061	71	6	-7	133
[	Se	78	-0.342	ug/L	0.038	11	8644	8913	1
[	Mo	98	0.252	ug/L	0.012	4	14	1133	3
	Y	89		ug/L			278872	400676	1
	Kr	83		ug/L			509	729	2
[>	In	115		ug/L			878990	914511	0
[	Ag	107	0.100	ug/L	0.001	1	24	1303	0
[	Cd	111	0.295	ug/L	0.022	7	66	1383	6
[	Cd	114	0.197	ug/L	0.005	2	45	2227	3
[	Sb	121	~0.017	ug/L	0.003	17	270	518	8
[	Sb	123	0.017	ug/L	0.003	19	194	388	9
[	Ba	135	141.552	ug/L	1.158	0	45	561300	0
[	Ba	137	140.913	ug/L	1.413	1	76	964999	1
[>	Tb	159		ug/L			958896	1036798	1
[	Tl	205	~ 0.089	ug/L	0.001	1	228	2894	2
[	Pb	208	8.899	ug/L	0.145	1	272	351159	0
[	Bi	209		ug/L			2065247	2102953	1
[	Th	232	4.970	ug/L	0.084	1	1210	188211	0
[	U	238	0.885	ug/L	0.011	1	68	33930	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:32:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	653961	1
	Be	9	0.451	ug/L	0.030	6	9	924	8
	C	13		ug/L			57054	68265	0
	Cl	37		ug/L			3021538	3127098	3
>	Sc	45		ug/L			603049	691582	1
	V	51	22.837	ug/L	0.414	1	5204	335837	1
	V-1	51	22.965	ug/L	0.404	1	161	331657	1
	Cr	52	14.833	ug/L	0.234	1	15338	203287	1
	Cr	53	15.233	ug/L	0.222	1	120	21634	0
	Mn	55	264.972	ug/L	11.276	4	851	4574139	3
	Co	59	4.892	ug/L	0.153	3	76	65636	2
>	Ge	72		ug/L			436831	464017	0
	Ni	60	12.393	ug/L	0.135	1	19	34866	0
	Ni	62	13.514	ug/L	0.198	1	34	5378	1
	Cu	63	10.776	ug/L	0.245	2	79	68125	2
	Cu	65	11.076	ug/L	0.148	1	33	31631	0
	Zn	66	36.820	ug/L	0.380	1	137	62038	1
	Zn	67	45.338	ug/L	1.670	3	26	12448	3
	Zn	68	40.521	ug/L	0.794	1	127	49133	2
	As	75	3.471	ug/L	0.064	1	255	5711	1
	As-1	75	3.186	ug/L	0.111	3	8509	14026	1
	Se	82	u -0.069	ug/L	0.057	82	6	-5	187
	Se	78	-0.805	ug/L	0.234	29	8644	8834	1
	Mo	98	0.265	ug/L	0.013	4	14	1207	4
	Y	89		ug/L			278872	393585	1
	Kr	83		ug/L			509	708	4
>	In	115		ug/L			878990	906983	1
	Ag	107	0.078	ug/L	0.003	4	24	1017	3
	Cd	111	0.222	ug/L	0.014	6	66	1047	6
	Cd	114	0.123	ug/L	0.006	4	45	1399	3
	Sb	121	u 0.001	ug/L	0.000	27	270	295	2
	Sb	123	0.003	ug/L	0.002	88	194	229	10
	Ba	135	104.402	ug/L	3.803	3	45	410465	2
	Ba	137	103.603	ug/L	1.346	1	76	703567	0
>	Tb	159		ug/L			958896	1041447	0
	Tl	205	u 0.079	ug/L	0.003	3	228	2624	3
	Pb	208	8.498	ug/L	0.025	0	272	336903	0
	Bi	209		ug/L			2065247	2107307	0
	Th	232	5.765	ug/L	0.016	0	1210	219092	0
	U	238	0.832	ug/L	0.007	0	68	32063	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:36:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652789	0
[	Be	9	0.439	ug/L	0.017	3	9	898	3
	C	13		ug/L			57054	80698	0
	Cl	37		ug/L			3021538	3118216	0
[>	Sc	45		ug/L			603049	687876	1
[	V	51	19.876	ug/L	0.651	3	5204	291413	1
[	V-1	51	20.089	ug/L	0.787	3	161	288487	2
[	Cr	52	20.974	ug/L	0.449	2	15338	278674	2
[	Cr	53	21.673	ug/L	0.617	2	120	30554	1
[	Mn	55	656.654	ug/L	25.112	3	851	11273132	2
[	Co	59	5.662	ug/L	0.153	2	76	75539	1
[>	Ge	72		ug/L			436831	450104	1
[	Ni	60	14.265	ug/L	0.480	3	19	38913	1
[	Ni	62	15.016	ug/L	0.269	1	34	5791	1
[	Cu	63	14.943	ug/L	0.188	1	79	91590	0
[	Cu	65	15.306	ug/L	0.158	1	33	42387	1
[	Zn	66	146.624	ug/L	3.058	2	137	239161	0
[	Zn	67	156.398	ug/L	4.108	2	26	41579	1
[	Zn	68	151.393	ug/L	1.220	0	127	177686	1
[	As	75	8.811	ug/L	0.096	1	255	13655	0
[	As-1	75	8.702	ug/L	0.148	1	8509	21981	0
[	Se	82	~~-0.001~~	ug/L	0.099	13003	6	6	257
[	Se	78	-0.164	ug/L	0.200	121	8644	8837	1
[	Mo	98	0.314	ug/L	0.008	2	14	1386	2
	Y	89		ug/L			278872	390901	2
	Kr	83		ug/L			509	662	7
[>	In	115		ug/L			878990	905498	1
[	Ag	107	0.080	ug/L	0.001	1	24	1039	1
[	Cd	111	2.372	ug/L	0.018	0	66	10525	1
[	Cd	114	2.329	ug/L	0.056	2	45	25575	1
[	Sb	121	~~0.099~~	ug/L	0.003	2	270	1668	0
[	Sb	123	0.101	ug/L	0.006	6	194	1282	3
[	Ba	135	284.284	ug/L	5.828	2	45	1115978	0
[	Ba	137	281.896	ug/L	7.793	2	76	1910911	1
[>	Tb	159		ug/L			958896	1037122	1
[	Tl	205	~~0.132~~	ug/L	0.001	0	228	4187	1
[	Pb	208	106.855	ug/L	1.005	0	272	4214768	1
[	Bi	209		ug/L			2065247	2089907	1
[	Th	232	5.293	ug/L	0.042	0	1210	200433	1
[	U	238	0.554	ug/L	0.007	1	68	21288	2

VR33 : 00327

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:40:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, V, Cr, Co, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652803	2
[	Be	9	0.901	ug/L	0.011	1	9	1832	3
	C	13		ug/L			57054	105913	1
	Cl	37		ug/L			3021538	3247572	2
[>	Sc	45		ug/L			603049	740908	0
[	V	51	31.131	ug/L	0.647	2	5204	488193	2
[	V-1	51	31.733	ug/L	0.469	1	161	490961	1
[	Cr	52	79.497	ug/L	0.477	0	15338	1085099	0
[	Cr	53	81.582	ug/L	1.029	1	120	123501	0
[	Mn	55	2216.178	ug/L	9.067	0	851	40989699	0
[	Co	59	19.382	ug/L	0.478	2	76	278349	2
[>	Ge	72		ug/L			436831	451120	1
[	Ni	60	74.609	ug/L	0.359	0	19	203975	1
[	Ni	62	77.128	ug/L	2.645	3	34	29667	3
[	Cu	63	47.456	ug/L	1.049	2	79	291346	1
[	Cu	65	49.251	ug/L	1.214	2	33	136634	2
[	Zn	66	660.554	ug/L	14.508	2	137	1079448	1
[	Zn	67	669.234	ug/L	6.886	1	26	178287	2
[	Zn	68	671.832	ug/L	18.454	2	127	789831	2
[	As	75	17.911	ug/L	0.179	0	255	27549	0
[	As-1	75	17.776	ug/L	0.273	1	8509	35842	0
[	Se	82	0.114	ug/L	0.036	31	6	25	23
[	Se	78	0.017	ug/L	0.386	2326	8644	8932	0
[	Mo	98	0.654	ug/L	0.010	1	14	2877	1
	Y	89		ug/L			278872	484044	0
	Kr	83		ug/L			509	764	3
[>	In	115		ug/L			878990	944834	1
[	Ag	107	0.235	ug/L	0.007	3	24	3121	3
[	Cd	111	11.250	ug/L	0.062	0	66	51807	1
[	Cd	114	11.031	ug/L	0.241	2	45	126196	1
[	Sb	121	0.181	ug/L	0.001	0	270	2932	1
[	Sb	123	0.180	ug/L	0.006	3	194	2224	1
[	Ba	135	883.988	ug/L	10.305	1	45	3621238	1
[	Ba	137	878.169	ug/L	15.805	1	76	6211855	1
[>	Tb	159		ug/L			958896	1057086	0
[	Tl	205	0.633	ug/L	0.007	1	228	19538	0
[	Pb	208	503.600	ug/L	4.184	0	272	20246490	0
[	Bi	209		ug/L			2065247	2096336	0
[	Th	232	6.707	ug/L	0.049	0	1210	258508	0
[	U	238	0.869	ug/L	0.010	1	68	33976	0

VR33 : 00328

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:45:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	659860	1
[	Be	9	0.490	ug/L	0.003	0	9	1010	1
	C	13		ug/L			57054	87747	1
	Cl	37		ug/L			3021538	3207753	0
[>	Sc	45		ug/L			603049	684691	0
[	V	51	18.100	ug/L	0.106	0	5204	264766	0
[	V-1	51	18.252	ug/L	0.104	0	161	261029	0
[	Cr	52	15.037	ug/L	0.209	1	15338	203790	0
[	Cr	53	15.528	ug/L	0.302	1	120	21833	1
[	Mn	55	837.663	ug/L	3.264	0	851	14317910	0
[	Co	59	5.213	ug/L	0.080	1	76	69244	0
[>	Ge	72		ug/L			436831	467080	2
[	Ni	60	12.334	ug/L	0.238	1	19	34922	1
[	Ni	62	13.842	ug/L	0.630	4	34	5539	2
[	Cu	63	14.220	ug/L	0.289	2	79	90429	0
[	Cu	65	14.764	ug/L	0.618	4	33	42404	1
[	Zn	66	240.953	ug/L	10.853	4	137	407559	2
[	Zn	67	244.879	ug/L	9.764	3	26	67516	1
[	Zn	68	244.144	ug/L	11.243	4	127	297073	2
[	As	75	8.166	ug/L	0.228	2	255	13149	1
[	As-1	75	7.988	ug/L	0.432	5	8509	21677	0
[	Se	82	-0.020	ug/L	0.021	107	6	3	116
[	Se	78	-0.520	ug/L	0.767	147	8644	9011	1
[	Mo	98	0.304	ug/L	0.008	2	14	1392	1
	Y	89		ug/L			278872	382556	2
	Kr	83		ug/L			509	638	3
[>	In	115		ug/L			878990	932293	1
[	Ag	107	0.114	ug/L	0.002	1	24	1503	0
[	Cd	111	3.707	ug/L	0.060	1	66	16890	0
[	Cd	114	3.640	ug/L	0.056	1	45	41119	0
[	Sb	121	0.131	ug/L	0.010	8	270	2169	5
[	Sb	123	0.127	ug/L	0.005	4	194	1606	2
[	Ba	135	303.026	ug/L	9.111	3	45	1224615	1
[	Ba	137	306.875	ug/L	7.056	2	76	2141768	0
[>	Tb	159		ug/L			958896	1035263	0
[	Tl	205	0.214	ug/L	0.002	0	228	6646	0
[	Pb	208	205.749	ug/L	1.900	0	272	8101184	0
[	Bi	209		ug/L			2065247	2134599	0
[	Th	232	4.645	ug/L	0.090	1	1210	175742	1
[	U	238	0.805	ug/L	0.009	1	68	30812	1

ICP-MS Quantitative Analysis - Summary Report

11.16.12 MJ

rr Be, Ag, V, Cr, ~~Mn~~ Co, Pb, Zn

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	646477	3
[	Be	9	0.932	ug/L	0.043	4	9	1873	2
	C	13		ug/L			57054	98603	4
	Cl	37		ug/L			3021538	3224780	0
[>	Sc	45		ug/L			603049	750911	2
[	V	51	33.294	ug/L	1.208	3	5204	528624	3
[	V-1	51	33.698	ug/L	0.653	1	161	528316	2
[	Cr	52	92.999	ug/L	2.685	2	15338	1282990	2
[	Cr	53	94.463	ug/L	1.595	1	120	144879	0
[	Mn	55	1524.642	ug/L	46.532	3	851	28571568	2
[	Co	59	19.177	ug/L	0.403	2	76	279089	1
[>	Ge	72		ug/L			436831	451107	1
[	Ni	60	92.638	ug/L	1.200	1	19	253228	0
[	Ni	62	93.787	ug/L	2.822	3	34	36063	1
[	Cu	63	42.354	ug/L	0.860	2	79	260014	1
[	Cu	65	43.499	ug/L	0.894	2	33	120654	0
[	Zn	66	440.674	ug/L	5.192	1	137	720209	0
[	Zn	67	447.020	ug/L	13.866	3	26	119054	1
[	Zn	68	457.059	ug/L	3.905	0	127	537365	0
[	As	75	16.823	ug/L	0.488	2	255	25886	1
[	As-1	75	16.711	ug/L	0.581	3	8509	34215	1
[	Se	82	~ 0.128	ug/L	0.032	24	6	27	19
[	Se	78	0.127	ug/L	0.410	323	8644	8978	0
[	Mo	98	0.606	ug/L	0.015	2	14	2667	1
	Y	89		ug/L			278872	450914	1
	Kr	83		ug/L			509	769	3
[>	In	115		ug/L			878990	934601	0
[	Ag	107	0.224	ug/L	0.004	1	24	2949	1
[	Cd	111	6.628	ug/L	0.087	1	66	30219	0
[	Cd	114	6.528	ug/L	0.103	1	45	73900	1
[	Sb	121	~ 0.057	ug/L	0.001	1	270	1111	1
[	Sb	123	0.058	ug/L	0.002	2	194	849	2
[	Ba	135	763.747	ug/L	10.518	1	45	3094871	1
[	Ba	137	751.426	ug/L	17.620	2	76	5258251	2
[>	Tb	159		ug/L			958896	1065150	1
[	Tl	205	0.514	ug/L	0.010	1	228	16019	1
[	Pb	208	336.315	ug/L	10.101	3	272	13619865	1
[	Bi	209		ug/L			2065247	2028719	3
[	Th	232	6.409	ug/L	0.199	3	1210	248873	1
[	U	238	0.858	ug/L	0.009	1	68	33796	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:54:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	631661	2
	Be	9	54.749	ug/L	2.119	3	9	107112	2
	C	13		ug/L			57054	57197	1
	Cl	37		ug/L			3021538	3177310	3
>	Sc	45		ug/L			603049	641952	0
	V	51	49.115	ug/L	0.418	0	5204	664117	0
	V-1	51	49.603	ug/L	0.591	1	161	664793	0
	Cr	52	48.946	ug/L	1.833	3	15338	585098	3
	Cr	53	50.541	ug/L	2.364	4	120	66332	4
	Mn	55	49.834	ug/L	1.601	3	851	799414	2
	Co	59	48.840	ug/L	1.797	3	76	607560	3
>	Ge	72		ug/L			436831	458837	1
	Ni	60	47.678	ug/L	0.554	1	19	132588	1
	Ni	62	47.840	ug/L	0.059	0	34	18733	1
	Cu	63	48.978	ug/L	0.830	1	79	305830	0
	Cu	65	49.095	ug/L	0.960	1	33	138509	0
	Zn	66	48.981	ug/L	1.178	2	137	81545	1
	Zn	67	50.733	ug/L	0.487	0	26	13771	0
	Zn	68	49.222	ug/L	0.824	1	127	58979	0
	As	75	48.704	ug/L	0.630	1	255	75731	0
	As-1	75	48.834	ug/L	0.658	1	8509	84533	0
	Se	82	49.158	ug/L	0.885	1	6	8299	1
	Se	78	49.596	ug/L	0.832	1	8644	30277	0
	Mo	98	43.133	ug/L	1.389	3	14	192141	3
	Y	89		ug/L			278872	300031	1
	Kr	83		ug/L			509	539	4
>	In	115		ug/L			878990	882555	1
	Ag	107	41.848	ug/L	0.960	2	24	515078	1
	Cd	111	49.818	ug/L	0.634	1	66	214067	1
	Cd	114	50.328	ug/L	0.456	0	45	537654	0
	Sb	121	50.318	ug/L	1.319	2	270	686362	1
	Sb	123	49.645	ug/L	0.225	0	194	519051	0
	Ba	135	49.602	ug/L	0.732	1	45	189830	0
	Ba	137	49.840	ug/L	0.986	1	76	329387	1
>	Tb	159		ug/L			958896	997391	1
	Tl	205	51.078	ug/L	0.841	1	228	1468619	0
	Pb	208	50.177	ug/L	0.907	1	272	1903417	0
	Bi	209		ug/L			2065247	2011965	3
	Th	232	51.028	ug/L	1.090	2	1210	1847186	0
	U	238	52.810	ug/L	1.067	2	68	1943189	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:01:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	610503 ✓	2
	Be	9	-0.002	ug/L	0.002	124	9	5	71
	C	13		ug/L			57054	57517	1
	Cl	37		ug/L			3021538	3066212	1
>	Sc	45		ug/L			603049	604213 ✓	0
	V	51	0.004	ug/L	0.015	425	5204	5259	3
	V-1	51	-0.004	ug/L	0.001	24	161	110	11
	Cr	52	0.013	ug/L	0.045	347	15338	15510	3
	Cr	53	-0.012	ug/L	0.008	67	120	106	9
	Mn	55	-0.025	ug/L	0.010	42	851	482	32
	Co	59	0.000	ug/L	0.002	606	76	80	31
>	Ge	72		ug/L			436831	432422 ✓	1
	Ni	60	0.004	ug/L	0.004	102	19	30	35
	Ni	62	0.012	ug/L	0.012	103	34	38	10
	Cu	63	0.001	ug/L	0.002	179	79	86	15
	Cu	65	0.001	ug/L	0.002	166	33	36	14
	Zn	66	0.011	ug/L	0.010	87	137	152	8
	Zn	67	-0.004	ug/L	0.006	147	26	25	4
	Zn	68	0.017	ug/L	0.009	52	127	144	5
	As	75	-0.002	ug/L	0.017	725	255	249	10
	As-1	75	0.171	ug/L	0.066	38	8509	8673	1
	Se	82	-0.069	ug/L	0.036	51	6	-4	116
	Se	78	0.619	ug/L	0.220	35	8644	8805	0
	Mo	98	0.007	ug/L	0.002	24	14	44	15
	Y	89		ug/L			278872	285995	2
	Kr	83		ug/L			509	536	2
>	In	115		ug/L			878990	868994 ✓	1
	Ag	107	0.001	ug/L	0.001	131	24	37	44
	Cd	111	0.002	ug/L	0.001	53	66	73	5
	Cd	114	0.001	ug/L	0.001	108	45	52	14
	Sb	121	0.039	ug/L	0.008	19	270	786	11
	Sb	123	0.042	ug/L	0.007	16	194	622	9
	Ba	135	0.005	ug/L	0.009	161	45	65	48
	Ba	137	0.006	ug/L	0.011	173	76	116	60
>	Tb	159		ug/L			958896	938191 ✓	0
	Tl	205	-0.002	ug/L	0.002	113	228	163	40
	Pb	208	0.002	ug/L	0.006	266	272	343	58
	Bi	209		ug/L			2065247	1974704	1
	Th	232	0.064	ug/L	0.001	1	1210	3355	0
	U	238	0.001	ug/L	0.002	222	68	97	68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:05:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	637006	1
[	Be	9	0.103	ug/L	0.004	4	9	213	2
	C	13		ug/L			57054	67624	0
	Cl	37		ug/L			3021538	3041267	1
[>	Sc	45		ug/L			603049	633984	1
[	V	51	3.994	ug/L	0.130	3	5204	58372	3
[	V-1	51	4.050	ug/L	0.130	3	161	53765	3
[	Cr	52	4.442	ug/L	0.137	3	15338	67103	2
[	Cr	53	4.623	ug/L	0.133	2	120	6109	3
[	Mn	55	216.997	ug/L	3.018	1	851	3435329	2
[	Co	59	1.501	ug/L	0.025	1	76	18519	2
[>	Ge	72		ug/L			436831	455111	1
[	Ni	60	4.489	ug/L	0.110	2	19	12398	2
[	Ni	62	4.759	ug/L	0.264	5	34	1879	4
[	Cu	63	5.949	ug/L	0.241	4	79	36912	3
[	Cu	65	6.187	ug/L	0.305	4	33	17343	4
[	Zn	66	85.240	ug/L	3.453	4	137	140645	3
[	Zn	67	82.675	ug/L	3.167	3	26	22238	3
[	Zn	68	84.634	ug/L	4.842	5	127	100463	4
[	As	75	2.947	ug/L	0.116	3	255	4794	3
[	As-1	75	2.875	ug/L	0.129	4	8509	13279	1
[	Se	82	0.033	ug/L	0.110	330	6	12	153
[	Se	78	-0.224	ug/L	0.098	43	8644	8911	1
[	Mo	98	0.056	ug/L	0.006	11	14	263	9
	Y	89		ug/L			278872	314558	1
	Kr	83		ug/L			509	536	4
[>	In	115		ug/L			878990	911173	0
[	Ag	107	0.041	ug/L	0.002	4	24	543	3
[	Cd	111	1.666	ug/L	0.067	4	66	7459	3
[	Cd	114	1.610	ug/L	0.055	3	45	17806	3
[	Sb	121	0.129	ug/L	0.009	7	270	2103	6
[	Sb	123	0.125	ug/L	0.005	4	194	1552	3
[	Ba	135	57.612	ug/L	1.614	2	45	227648	2
[	Ba	137	56.889	ug/L	1.259	2	76	388190	2
[>	Tb	159		ug/L			958896	1000226	1
[	Tl	205	0.081	ug/L	0.010	12	228	2581	12
[	Pb	208	92.949	ug/L	2.824	3	272	3536663	3
[	Bi	209		ug/L			2065247	2130065	0
[	Th	232	0.855	ug/L	0.008	0	1210	32286	0
[	U	238	0.156	ug/L	0.006	3	68	5843	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:09:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	659945	0
[	Be	9	0.489	ug/L	0.009	1	9	1009	2
	C	13		ug/L			57054	92591	3
	Cl	37		ug/L			3021538	3219430	3
[>	Sc	45		ug/L			603049	679492 ✓	0
[	V	51	17.965	ug/L	0.267	1	5204	260831	1
[	V-1	51	18.214	ug/L	0.185	1	161	258511	1
[	Cr	52	19.921	ug/L	0.650	3	15338	262287	2
[	Cr	53	20.741	ug/L	0.173	0	120	28896	0
[	Mn	55	954.912	ug/L	16.335	1	851	16196755	1
[	Co	59	6.576	ug/L	0.050	0	76	86670	1
[>	Ge	72		ug/L			436831	459496 ✓	1
[	Ni	60	21.314	ug/L	0.323	1	19	59360	0
[	Ni	62	22.515	ug/L	0.147	0	34	8847	1
[	Cu	63	28.166	ug/L	0.586	2	79	176141	0
[	Cu	65	28.743	ug/L	0.470	1	33	81218	0
[	Zn	66	392.717	ug/L	6.716	1	137	653717	0
[	Zn	67	381.019	ug/L	3.165	0	26	103387	1
[	Zn	68	393.427	ug/L	14.100	3	127	471074	2
[	As	75	13.970	ug/L	0.295	2	255	21942	1
[	As-1	75	13.866	ug/L	0.363	2	8509	30443	1
[	Se	82	0.165	ug/L	0.029	17	6	34	13
[	Se	78	-0.065	ug/L	0.282	432	8644	9063	0
[	Mo	98	0.270	ug/L	0.018	6	14	1219	4
	Y	89		ug/L			278872	384939	0
	Kr	83		ug/L			509	638	1
[>	In	115		ug/L			878990	941748 ✓	1
[	Ag	107	0.191	ug/L	0.010	5	24	2530	4
[	Cd	111	7.546	ug/L	0.010	0	66	34660	1
[	Cd	114	7.411	ug/L	0.113	1	45	84523	0
	Sb	121	0.586	ug/L	0.004	0	270	8817	0
	Sb	123	0.584	ug/L	0.015	2	194	6723	1
	Ba	135	271.539	ug/L	4.571	1	45	1108683	0
	Ba	137	271.749	ug/L	4.483	1	76	1916054	0
>	Tb	159		ug/L			958896	1039259 ✓	1
	Tl	205	0.323	ug/L	0.007	2	228	9910	1
	Pb	208	431.383	ug/L	9.534	2	272	17048624	1
	Bi	209		ug/L			2065247	2127008	0
	Th	232	3.763	ug/L	0.061	1	1210	143162	0
	U	238	0.743	ug/L	0.015	1	68	28549	1

VR33 : 00334

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:13:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	647756	0
	Be	9	0.494	ug/L	0.006	1	9	1000	1
	C	13		ug/L			57054	94956	1
	Cl	37		ug/L			3021538	3156324	1
>	Sc	45		ug/L			603049	702300	1
	V	51	16.547	ug/L	0.405	2	5204	248773	1
	V-1	51	16.594	ug/L	0.413	2	161	243410	1
	Cr	52	16.563	ug/L	0.141	0	15338	228432	0
	Cr	53	16.716	ug/L	0.170	1	120	24097	0
	Mn	55	966.645	ug/L	6.870	0	851	16947412	1
	Co	59	6.195	ug/L	0.049	0	76	84391	0
>	Ge	72		ug/L			436831	462065	1
	Ni	60	16.938	ug/L	0.092	0	19	47444	1
	Ni	62	18.102	ug/L	0.158	0	34	7160	1
	Cu	63	27.983	ug/L	0.352	1	79	175994	0
	Cu	65	28.132	ug/L	0.710	2	33	79929	0
	Zn	66	391.139	ug/L	9.801	2	137	654692	1
	Zn	67	374.346	ug/L	12.339	3	26	102115	1
	Zn	68	392.371	ug/L	9.891	2	127	472452	1
	As	75	14.229	ug/L	0.202	1	255	22471	0
	As-1	75	14.040	ug/L	0.279	1	8509	30885	0
	Se	82	0.178	ug/L	0.069	38	6	36	32
	Se	78	-0.379	ug/L	0.356	93	8644	8978	0
	Mo	98	0.273	ug/L	0.018	6	14	1239	4
	Y	89		ug/L			278872	390890	2
	Kr	83		ug/L			509	631	5
>	In	115		ug/L			878990	943986	0
	Ag	107	0.183	ug/L	0.004	2	24	2436	1
	Cd	111	7.450	ug/L	0.092	1	66	34302	0
	Cd	114	7.390	ug/L	0.072	0	45	84487	0
	Sb	121	0.624	ug/L	0.021	3	270	9386	2
	Sb	123	0.608	ug/L	0.013	2	194	7009	1
	Ba	135	273.578	ug/L	2.113	0	45	1119803	1
	Ba	137	266.340	ug/L	3.056	1	76	1882638	1
>	Tb	159		ug/L			958896	1046147	1
	Tl	205	0.325	ug/L	0.004	1	228	10053	0
	Pb	208	429.843	ug/L	7.411	1	272	17100813	0
	Bi	209		ug/L			2065247	2144519	0
	Th	232	3.857	ug/L	0.057	1	1210	147699	0
	U	238	0.780	ug/L	0.008	1	68	30195	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ASPK SWN
Sample Dil Factor: 20
Comments:

rr Ag. Pb. Zn

Sample Date/Time: Thursday, November 15, 2012 20:17:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637208	1
	Be	9	30.065	ug/L	0.914	3	9	59358	2
	C	13		ug/L			57054	94138	2
	Cl	37		ug/L			3021538	3154077	1
>	Sc	45		ug/L			603049	693199	1
	V	51	44.099	ug/L	2.367	5	5204	644129	3
	V-1	51	44.542	ug/L	2.160	4	161	644324	3
	Cr	52	42.583	ug/L	1.669	3	15338	551738	1
	Cr	53	44.027	ug/L	0.864	1	120	62408	0
	Mn	55	1066.179	ug/L	60.030	5	851	18436850	3
	Co	59	31.849	ug/L	0.861	2	76	427814	2
>	Ge	72		ug/L			436831	460729	0
	Ni	60	44.076	ug/L	1.413	3	19	123086	3
	Ni	62	44.442	ug/L	1.632	3	34	17477	3
	Cu	63	55.959	ug/L	1.524	2	79	350905	2
	Cu	65	56.757	ug/L	0.646	1	33	160805	1
	Zn	66	511.574	ug/L	12.178	2	137	854011	2
	Zn	67	494.188	ug/L	11.977	2	26	134458	2
	Zn	68	516.221	ug/L	4.390	0	127	619904	1
	As	75	41.220	ug/L	0.426	1	255	64406	1
	As-1	75	41.234	ug/L	0.381	0	8509	73074	1
	Se	82	81.084	ug/L	1.407	1	6	13743	1
	Se	78	81.370	ug/L	1.275	1	8644	44042	1
	Mo	98	20.489	ug/L	0.304	1	14	91652	1
	Y	89		ug/L			278872	399282	2
	Kr	83		ug/L			509	630	2
>	In	115		ug/L			878990	936454	0
	Ag	107	19.346	ug/L	0.408	2	24	252691	2
	Cd	111	33.322	ug/L	1.149	3	66	151924	2
	Cd	114	33.449	ug/L	0.712	2	45	379164	1
	Sb	121	2.201	ug/L	0.057	2	270	32134	1
	Sb	123	2.193	ug/L	0.090	4	194	24517	3
	Ba	135	324.273	ug/L	11.311	3	45	1316420	2
	Ba	137	326.513	ug/L	8.780	2	76	2289121	1
>	Tb	159		ug/L			958896	1051472	1
	Tl	205	26.098	ug/L	0.365	1	228	791356	2
	Pb	208	492.421	ug/L	3.320	0	272	19692339	1
	Bi	209		ug/L			2065247	2141259	0
	Th	232	29.408	ug/L	0.493	1	1210	1123126	2
	U	238	27.442	ug/L	0.465	1	68	1064812	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:21:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	652368	1
	Be	9	28.217	ug/L	0.910	3	9	57031	1
	C	13		ug/L			57054	94149	2
	Cl	37		ug/L			3021538	3175625	0
>	Sc	45		ug/L			603049	680693	1
	V	51	42.032	ug/L	0.668	1	5204	603481	1
	V-1	51	42.307	ug/L	0.607	1	161	601264	1
	Cr	52	43.930	ug/L	0.917	2	15338	558555	1
	Cr	53	44.834	ug/L	0.836	1	120	62407	0
	Mn	55	961.014	ug/L	29.887	3	851	16325654	1
	Co	59	31.451	ug/L	0.767	2	76	414844	1
>	Ge	72		ug/L			436831	458582	1
	Ni	60	46.329	ug/L	0.394	0	19	128767	1
	Ni	62	46.734	ug/L	0.680	1	34	18290	1
	Cu	63	51.954	ug/L	0.836	1	79	324243	1
	Cu	65	53.239	ug/L	0.763	1	33	150124	0
	Zn	66	461.363	ug/L	15.090	3	137	766424	2
	Zn	67	452.954	ug/L	13.238	2	26	122644	2
	Zn	68	461.614	ug/L	6.792	1	127	551709	0
	As	75	38.804	ug/L	0.552	1	255	60358	0
	As-1	75	38.891	ug/L	0.580	1	8509	69103	0
	Se	82	81.139	ug/L	0.713	0	6	13687	0
	Se	78	81.718	ug/L	0.874	1	8644	43982	0
	Mo	98	22.730	ug/L	0.401	1	14	101200	2
	Y	89		ug/L			278872	383235	1
	Kr	83		ug/L			509	637	1
>	In	115		ug/L			878990	924866	0
	Ag	107	20.490	ug/L	0.191	0	24	264342	1
	Cd	111	32.633	ug/L	0.556	1	66	146976	1
	Cd	114	32.396	ug/L	0.061	0	45	362727	0
	Sb	121	24.626	ug/L	0.248	1	270	352230	0
	Sb	123	24.417	ug/L	0.109	0	194	267634	0
	Ba	135	295.113	ug/L	2.705	0	45	1183451	0
	Ba	137	295.693	ug/L	5.803	1	76	2047814	2
>	Tb	159		ug/L			958896	1031394	1
	Tl	205	26.823	ug/L	0.158	0	228	797691	0
	Pb	208	454.014	ug/L	4.312	0	272	17808623	0
	Bi	209		ug/L			2065247	2096606	0
	Th	232	29.981	ug/L	0.238	0	1210	1122951	0
	U	238	27.336	ug/L	0.365	1	68	1040265	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:25:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	647867	0
	Be	9	0.573	ug/L	0.019	3	9	1160	2
	C	13		ug/L			57054	89594	4
	Cl	37		ug/L			3021538	3144138	1
>	Sc	45		ug/L			603049	709474	0
	V	51	30.158	ug/L	0.443	1	5204	453046	1
	V-1	51	30.424	ug/L	0.844	2	161	450714	2
	Cr	52	28.912	ug/L	0.514	1	15338	389388	1
	Cr	53	29.779	ug/L	0.993	3	120	43255	2
	Mn	55	799.043	ug/L	11.654	1	851	14152637	1
	Co	59	10.147	ug/L	0.208	2	76	139593	2
>	Ge	72		ug/L			436831	460869	1
	Ni	60	22.338	ug/L	0.639	2	19	62386	1
	Ni	62	23.730	ug/L	0.245	1	34	9352	2
	Cu	63	26.646	ug/L	0.347	1	79	167156	0
	Cu	65	26.651	ug/L	0.383	1	33	75548	2
	Zn	66	302.249	ug/L	3.940	1	137	504728	1
	Zn	67	295.916	ug/L	5.477	1	26	80554	2
	Zn	68	295.813	ug/L	4.707	1	127	355448	3
	As	75	15.038	ug/L	0.191	1	255	23672	0
	As-1	75	14.921	ug/L	0.287	1	8509	32174	0
	Se	82	0.032	ug/L	0.093	287	6	12	129
	Se	78	-0.120	ug/L	0.366	306	8644	9067	0
	Mo	98	0.484	ug/L	0.008	1	14	2178	0
	Y	89		ug/L			278872	445142	1
	Kr	83		ug/L			509	712	4
>	In	115		ug/L			878990	938356	0
	Ag	107	0.201	ug/L	0.004	2	24	2659	2
	Cd	111	5.733	ug/L	0.099	1	66	26254	2
	Cd	114	5.640	ug/L	0.041	0	45	64114	1
	Sb	121	0.225	ug/L	0.013	5	270	3547	5
	Sb	123	0.226	ug/L	0.009	4	194	2716	4
	Ba	135	270.539	ug/L	3.927	1	45	1100814	1
	Ba	137	268.838	ug/L	2.845	1	76	1888946	1
>	Tb	159		ug/L			958896	1044925	1
	Tl	205	0.320	ug/L	0.006	1	228	9887	0
	Pb	208	224.746	ug/L	5.886	2	272	8930210	1
	Bi	209		ug/L			2065247	2100934	0
	Th	232	6.218	ug/L	0.055	0	1210	236986	0
	U	238	0.780	ug/L	0.014	1	68	30124	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:30:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	645757	3
	Be	9	0.586	ug/L	0.045	7	9	1180	5
	C	13		ug/L			57054	89675	1
	Cl	37		ug/L			3021538	3128208	2
>	Sc	45		ug/L			603049	705676	1
	V	51	30.337	ug/L	0.561	1	5204	453297	2
	V-1	51	30.387	ug/L	0.610	2	161	447814	2
	Cr	52	28.962	ug/L	0.269	0	15338	387926	1
	Cr	53	29.123	ug/L	0.385	1	120	42082	1
	Mn	55	949.990	ug/L	12.780	1	851	16736855	2
	Co	59	10.944	ug/L	0.216	1	76	149735	2
>	Ge	72		ug/L			436831	460191	0
	Ni	60	24.402	ug/L	0.454	1	19	68074	2
	Ni	62	25.885	ug/L	0.545	2	34	10181	1
	Cu	63	29.343	ug/L	0.181	0	79	183813	0
	Cu	65	30.282	ug/L	0.434	1	33	85705	0
	Zn	66	316.674	ug/L	2.459	0	137	528043	0
	Zn	67	311.896	ug/L	3.204	1	26	84774	1
	Zn	68	316.956	ug/L	8.706	2	127	380181	2
	As	75	18.609	ug/L	0.437	2	255	29188	2
	As-1	75	18.436	ug/L	0.484	2	8509	37589	1
	Se	82	< 0.048	ug/L	0.068	142	6	14	78
	Se	78	-0.324	ug/L	0.181	55	8644	8967	0
	Mo	98	0.417	ug/L	0.014	3	14	1879	3
	Y	89		ug/L			278872	417239	0
	Kr	83		ug/L			509	705	6
>	In	115		ug/L			878990	914265	0
	Ag	107	0.218	ug/L	0.015	6	24	2802	6
	Cd	111	6.699	ug/L	0.059	0	66	29880	0
	Cd	114	6.669	ug/L	0.042	0	45	73850	0
	Sb	121	< 0.189	ug/L	0.009	4	270	2947	3
	Sb	123	0.195	ug/L	0.003	1	194	2313	1
	Ba	135	302.551	ug/L	4.053	1	45	1199383	1
	Ba	137	309.914	ug/L	6.134	1	76	2121590	1
>	Tb	159		ug/L			958896	1034792	0
	Tl	205	0.314	ug/L	0.004	1	228	9627	1
	Pb	208	274.312	ug/L	3.043	1	272	10796136	1
	Bi	209		ug/L			2065247	2088671	0
	Th	232	6.666	ug/L	0.106	1	1210	251537	1
	U	238	0.651	ug/L	0.012	1	68	24940	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:34:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	641470	0
[	Be	9	0.584	ug/L	0.015	2	9	1171	2
	C	13		ug/L			57054	81168	3
	Cl	37		ug/L			3021538	3155521	3
[>	Sc	45		ug/L			603049	717259	1
[	V	51	28.554	ug/L	0.586	2	5204	433933	1
[	V-1	51	28.757	ug/L	0.537	1	161	430665	0
[	Cr	52	28.096	ug/L	0.556	1	15338	383055	2
[	Cr	53	28.760	ug/L	0.661	2	120	42240	2
[	Mn	55	831.906	ug/L	28.334	3	851	14893848	2
[	Co	59	10.830	ug/L	0.111	1	76	150615	1
[>	Ge	72		ug/L			436831	462748	0
[	Ni	60	24.140	ug/L	0.914	3	19	67700	3
[	Ni	62	25.510	ug/L	0.408	1	34	10090	1
[	Cu	63	26.393	ug/L	0.798	3	79	166236	2
[	Cu	65	27.374	ug/L	0.378	1	33	77909	1
[	Zn	66	149.744	ug/L	1.579	1	137	251177	1
[	Zn	67	165.156	ug/L	1.375	0	26	45148	0
[	Zn	68	158.195	ug/L	1.813	1	127	190876	0
[	As	75	11.548	ug/L	0.043	0	255	18316	0
[	As-1	75	11.358	ug/L	0.107	0	8509	26747	0
[	Se	82	<0.037	ug/L	0.016	42	6	12	19
[	Se	78	-0.406	ug/L	0.191	46	8644	8981	0
[	Mo	98	0.414	ug/L	0.028	6	14	1871	5
	Y	89		ug/L			278872	420681	0
	Kr	83		ug/L			509	692	5
[>	In	115		ug/L			878990	889172	0
[	Ag	107	0.135	ug/L	0.003	2	24	1704	1
[	Cd	111	2.255	ug/L	0.042	1	66	9826	1
[	Cd	114	2.174	ug/L	0.052	2	45	23436	1
[	Sb	121	<0.103	ug/L	0.004	3	270	1683	2
[	Sb	123	0.099	ug/L	0.006	6	194	1233	4
[	Ba	135	295.592	ug/L	3.234	1	45	1139603	0
[	Ba	137	292.992	ug/L	5.571	1	76	1950556	1
[>	Tb	159		ug/L			958896	1044705	0
[	Tl	205	<0.162	ug/L	0.004	2	228	5117	1
[	Pb	208	105.877	ug/L	1.315	1	272	4206855	0
[	Bi	209		ug/L			2065247	2099346	1
[	Th	232	6.748	ug/L	0.120	1	1210	257037	1
[	U	238	0.657	ug/L	0.009	1	68	25400	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:39:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	655119	1
[	Be	9	0.667	ug/L	0.029	4	9	1364	4
	C	13		ug/L			57054	69401	1
	Cl	37		ug/L			3021538	3161794	0
[>	Sc	45		ug/L			603049	715986	0
[	V	51	32.530	ug/L	0.515	1	5204	492654	1
[	V-1	51	32.755	ug/L	0.540	1	161	489667	1
[	Cr	52	27.136	ug/L	0.219	0	15338	369939	1
[	Cr	53	27.859	ug/L	0.374	1	120	40847	0
[	Mn	55	493.150	ug/L	9.607	1	851	8814359	1
[	Co	59	9.292	ug/L	0.119	1	76	128995	0
[>	Ge	72		ug/L			436831	460272	1
[	Ni	60	22.408	ug/L	0.475	2	19	62505	0
[	Ni	62	23.851	ug/L	0.681	2	34	9383	1
[	Cu	63	23.178	ug/L	0.389	1	79	145232	1
[	Cu	65	23.895	ug/L	0.505	2	33	67643	1
[	Zn	66	57.283	ug/L	1.268	2	137	95632	0
[	Zn	67	69.233	ug/L	1.143	1	26	18838	0
[	Zn	68	62.809	ug/L	2.506	3	127	75434	2
[	As	75	5.649	ug/L	0.209	3	255	9046	2
[	As-1	75	5.496	ug/L	0.325	5	8509	17497	1
[	Se	82	-0.153	ug/L	0.036	23	6	-19	30
[	Se	78	-0.238	ug/L	0.462	194	8644	9004	1
[	Mo	98	0.288	ug/L	0.005	1	14	1299	3
	Y	89		ug/L			278872	480852	1
	Kr	83		ug/L			509	799	3
[>	In	115		ug/L			878990	887117	1
[	Ag	107	0.100	ug/L	0.001	0	24	1257	1
[	Cd	111	0.291	ug/L	0.046	15	66	1322	14
[	Cd	114	0.159	ug/L	0.005	3	45	1753	2
[	Sb	121	0.002	ug/L	0.002	100	270	297	6
[	Sb	123	0.003	ug/L	0.001	31	194	225	2
[	Ba	135	192.802	ug/L	5.349	2	45	741436	1
[	Ba	137	192.166	ug/L	7.093	3	76	1275987	2
[>	Tb	159		ug/L			958896	1043661	0
[	Tl	205	0.128	ug/L	0.003	2	228	4087	1
[	Pb	208	14.137	ug/L	0.167	1	272	561437	0
[	Bi	209		ug/L			2065247	2014568	2
[	Th	232	7.175	ug/L	0.181	2	1210	272945	2
[	U	238	1.076	ug/L	0.021	1	68	41513	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:43:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	641845	1
	Be	9	0.485	ug/L	0.011	2	9	974	3
	C	13		ug/L			57054	64560	2
	Cl	37		ug/L			3021538	3105443	2
>	Sc	45		ug/L			603049	696882	0
	V	51	28.398	ug/L	0.101	0	5204	419387	0
	V-1	51	28.726	ug/L	0.176	0	161	418040	0
	Cr	52	24.907	ug/L	0.437	1	15338	331936	1
	Cr	53	25.973	ug/L	0.473	1	120	37077	1
	Mn	55	335.658	ug/L	10.110	3	851	5839959	2
	Co	59	7.833	ug/L	0.154	1	76	105866	2
>	Ge	72		ug/L			436831	464768	0
	Ni	60	17.538	ug/L	0.402	2	19	49409	1
	Ni	62	19.301	ug/L	0.409	2	34	7676	1
	Cu	63	15.609	ug/L	0.463	2	79	98774	1
	Cu	65	16.169	ug/L	0.389	2	33	46229	1
	Zn	66	38.894	ug/L	0.536	1	137	65625	0
	Zn	67	47.895	ug/L	1.731	3	26	13168	2
	Zn	68	42.326	ug/L	0.738	1	127	51390	0
	As	75	4.564	ug/L	0.064	1	255	7435	2
	As-1	75	4.412	ug/L	0.083	1	8509	15971	1
	Se	82	∿0.022	ug/L	0.066	304	6	2	383
	Se	78	-0.384	ug/L	0.271	70	8644	9030	0
	Mo	98	0.375	ug/L	0.029	7	14	1705	6
	Y	89		ug/L			278872	424740	0
	Kr	83		ug/L			509	652	4
>	In	115		ug/L			878990	889539	0
	Ag	107	0.066	ug/L	0.001	2	24	840	1
	Cd	111	0.197	ug/L	0.005	2	66	919	2
	Cd	114	0.109	ug/L	0.002	1	45	1218	1
	Sb	121	∿ 0.001	ug/L	0.005	322	270	293	21
	Sb	123	0.001	ug/L	0.002	144	194	209	8
	Ba	135	138.361	ug/L	1.682	1	45	533671	0
	Ba	137	136.746	ug/L	1.518	1	76	910838	0
>	Tb	159		ug/L			958896	1027409	0
	Tl	205	∿ 0.105	ug/L	0.002	1	228	3358	1
	Pb	208	9.514	ug/L	0.076	0	272	372025	0
	Bi	209		ug/L			2065247	2022553	3
	Th	232	6.019	ug/L	0.066	1	1210	225617	1
	U	238	0.862	ug/L	0.012	1	68	32743	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:47:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	620983	1
	Be	9	54.707	ug/L	1.777	3	9	105232	1
	C	13		ug/L			57054	57598	3
	Cl	37		ug/L			3021538	3172655	0
>	Sc	45		ug/L			603049	634388	0
	V	51	50.821	ug/L	0.618	1	5204	678864	0
	V-1	51	50.943	ug/L	1.005	1	161	674646	1
	Cr	52	50.408	ug/L	0.287	0	15338	595025	0
	Cr	53	50.806	ug/L	1.745	3	120	65888	2
	Mn	55	50.010	ug/L	0.429	0	851	792818	0
	Co	59	50.361	ug/L	0.679	1	76	619126	0
>	Ge	72		ug/L			436831	453738	1
	Ni	60	48.589	ug/L	1.653	3	19	133576	2
	Ni	62	49.563	ug/L	1.216	2	34	19186	1
	Cu	63	49.838	ug/L	1.264	2	79	307717	1
	Cu	65	50.895	ug/L	1.253	2	33	141991	1
	Zn	66	49.803	ug/L	1.089	2	137	81990	1
	Zn	67	51.765	ug/L	0.731	1	26	13893	0
	Zn	68	50.811	ug/L	0.167	0	127	60208	1
	As	75	49.208	ug/L	0.899	1	255	75654	0
	As-1	75	49.483	ug/L	1.023	2	8509	84580	0
	Se	82	49.776	ug/L	0.606	1	6	8310	1
	Se	78	50.742	ug/L	0.836	1	8644	30424	0
	Mo	98	44.434	ug/L	0.342	0	14	195709	0
	Y	89		ug/L			278872	303370	1
	Kr	83		ug/L			509	534	5
>	In	115		ug/L			878990	878947	1
	Ag	107	40.536	ug/L	0.368	0	24	496963	1
	Cd	111	50.048	ug/L	1.176	2	66	214155	1
	Cd	114	50.430	ug/L	0.414	0	45	536555	0
	Sb	121	49.652	ug/L	0.916	1	270	674569	0
	Sb	123	49.296	ug/L	0.743	1	194	513266	0
	Ba	135	50.738	ug/L	1.263	2	45	193389	2
	Ba	137	49.423	ug/L	0.566	1	76	325303	0
>	Tb	159		ug/L			958896	982544	0
	Tl	205	51.258	ug/L	0.997	1	228	1451905	1
	Pb	208	50.146	ug/L	0.676	1	272	1874059	0
	Bi	209		ug/L			2065247	1974420	0
	Th	232	51.301	ug/L	0.321	0	1210	1829693	0
	U	238	52.722	ug/L	0.656	1	68	1911267	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	613614	0
	Be	9	-0.001	ug/L	0.002	374	9	8	45
	C	13		ug/L			57054	57457	2
	Cl	37		ug/L			3021538	3041146	1
>	Sc	45		ug/L			603049	609379	2
	V	51	0.003	ug/L	0.008	262	5204	5294	0
	V-1	51	-0.006	ug/L	0.002	32	161	93	27
	Cr	52	0.001	ug/L	0.022	2263	15338	15506	0
	Cr	53	-0.027	ug/L	0.010	37	120	88	16
	Mn	55	-0.030	ug/L	0.008	25	851	401	31
	Co	59	0.000	ug/L	0.002	639	76	81	32
>	Ge	72		ug/L			436831	451545	0
	Ni	60	0.001	ug/L	0.003	461	19	22	41
	Ni	62	0.017	ug/L	0.018	103	34	42	16
	Cu	63	0.000	ug/L	0.000	19	79	85	1
	Cu	65	0.003	ug/L	0.004	137	33	42	26
	Zn	66	0.001	ug/L	0.008	908	137	143	8
	Zn	67	-0.002	ug/L	0.009	417	26	27	9
	Zn	68	0.001	ug/L	0.003	548	127	132	2
	As	75	-0.023	ug/L	0.011	47	255	229	6
	As-1	75	-0.041	ug/L	0.087	211	8509	8732	0
	Se	82	-0.023	ug/L	0.116	497	6	2	749
	Se	78	-0.127	ug/L	0.303	237	8644	8881	0
	Mo	98	0.008	ug/L	0.002	22	14	47	14
	Y	89		ug/L			278872	285095	0
	Kr	83		ug/L			509	505	7
>	In	115		ug/L			878990	858842	1
	Ag	107	0.001	ug/L	0.001	75	24	37	27
	Cd	111	0.002	ug/L	0.002	76	66	74	8
	Cd	114	0.001	ug/L	0.002	258	45	50	31
	Sb	121	0.039	ug/L	0.003	8	270	787	4
	Sb	123	0.041	ug/L	0.007	17	194	609	10
	Ba	135	0.001	ug/L	0.005	540	45	48	38
	Ba	137	0.003	ug/L	0.004	115	76	94	23
>	Tb	159		ug/L			958896	921694	1
	Tl	205	-0.003	ug/L	0.002	89	228	151	39
	Pb	208	0.000	ug/L	0.002	1984	272	265	24
	Bi	209		ug/L			2065247	1982154	0
	Th	232	0.049	ug/L	0.002	4	1210	2807	2
	U	238	0.000	ug/L	0.001	664	68	72	60

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:58:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	616492	1
	Be	9	-0.002	ug/L	0.000	16	9	5	10
	C	13		ug/L			57054	60198	0
	Cl	37		ug/L			3021538	3023210	0
>	Sc	45		ug/L			603049	631911	0
	V	51	-0.002	ug/L	0.003	157	5204	5426	0
	V-1	51	-0.008	ug/L	0.000	1	161	68	3
	Cr	52	0.001	ug/L	0.010	1086	15338	16082	0
	Cr	53	-0.017	ug/L	0.005	30	120	104	6
	Mn	55	-0.018	ug/L	0.002	9	851	609	3
	Co	59	0.000	ug/L	0.001	133	76	85	8
>	Ge	72		ug/L			436831	447560	0
	Ni	60	0.001	ug/L	0.001	90	19	24	14
	Ni	62	-0.004	ug/L	0.013	329	34	33	14
	Cu	63	0.416	ug/L	0.012	2	79	2615	2
	Cu	65	0.420	ug/L	0.015	3	33	1189	3
	Zn	66	0.311	ug/L	0.018	5	137	645	3
	Zn	67	0.238	ug/L	0.056	23	26	90	17
	Zn	68	0.275	ug/L	0.024	8	127	451	6
	As	75	-0.001	ug/L	0.017	2837	255	261	9
	As-1	75	0.172	ug/L	0.118	68	8509	8977	1
	Se	82	-0.054	ug/L	0.077	144	6	-2	512
	Se	78	0.582	ug/L	0.454	78	8644	9098	1
	Mo	98	0.002	ug/L	0.001	54	14	23	21
	Y	89		ug/L			278872	299562	1
	Kr	83		ug/L			509	528	2
>	In	115		ug/L			878990	872908	1
	Ag	107	0.000	ug/L	0.001	534	24	25	31
	Cd	111	0.003	ug/L	0.002	89	66	77	12
	Cd	114	-0.001	ug/L	0.001	42	45	31	18
	Sb	121	-0.000	ug/L	0.002	532	270	263	12
	Sb	123	0.001	ug/L	0.004	453	194	203	23
	Ba	135	-0.004	ug/L	0.002	40	45	30	19
	Ba	137	-0.004	ug/L	0.000	12	76	52	6
>	Tb	159		ug/L			958896	947500	0
	Tl	205	-0.004	ug/L	0.001	24	228	121	20
	Pb	208	0.019	ug/L	0.001	6	272	938	4
	Bi	209		ug/L			2065247	2052218	3
	Th	232	0.018	ug/L	0.007	41	1210	1799	14
	U	238	-0.001	ug/L	0.000	10	68	26	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:02:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	622010	0
	Be	**9**	**27.804**	ug/L	0.297	1	9	53596	0
	C	**13**		ug/L			57054	59976	1
	Cl	**37**		ug/L			3021538	3017324	3
>	**Sc**	**45**		ug/L			603049	619764	2
	V	**51**	**25.713**	ug/L	0.162	0	5204	338187	2
	V-1	**51**	**25.949**	ug/L	0.300	1	161	335818	2
	Cr	**52**	**26.162**	ug/L	0.486	1	15338	309203	1
	Cr	**53**	**26.936**	ug/L	0.653	2	120	34182	2
	Mn	**55**	**26.356**	ug/L	0.964	3	851	408366	0
	Co	**59**	**26.365**	ug/L	0.462	1	76	316625	1
>	**Ge**	**72**		ug/L			436831	449238	1
	Ni	**60**	**25.613**	ug/L	0.237	0	19	69744	1
	Ni	**62**	**25.884**	ug/L	0.282	1	34	9938	0
	Cu	**63**	**25.919**	ug/L	0.411	1	79	158486	0
	Cu	**65**	**26.597**	ug/L	0.931	3	33	73463	1
	Zn	**66**	**83.190**	ug/L	2.214	2	137	135482	1
	Zn	**67**	**79.647**	ug/L	1.196	1	26	21151	1
	Zn	**68**	**83.017**	ug/L	0.672	0	127	97303	1
	As	**75**	**25.308**	ug/L	0.698	2	255	38645	1
	As-1	**75**	**25.337**	ug/L	0.713	2	8509	47144	1
	Se	**82**	**82.151**	ug/L	1.875	2	6	13573	1
	Se	**78**	**82.368**	ug/L	1.973	2	8644	43354	1
	Mo	**98**	**22.363**	ug/L	0.421	1	14	97536	2
	Y	**89**		ug/L			278872	293339	2
	Kr	**83**		ug/L			509	519	2
>	**In**	**115**		ug/L			878990	868956	2
	Ag	**107**	**21.769**	ug/L	0.308	1	24	263822	1
	Cd	**111**	**25.519**	ug/L	0.346	1	66	107993	2
	Cd	**114**	**25.869**	ug/L	0.540	2	45	272077	1
	Sb	**121**	**25.244**	ug/L	0.752	2	270	339118	1
	Sb	**123**	**24.955**	ug/L	0.521	2	194	256925	0
	Ba	**135**	**25.833**	ug/L	0.678	2	45	97338	0
	Ba	**137**	**25.772**	ug/L	0.515	2	76	167710	0
>	**Tb**	**159**		ug/L			958896	940958	3
	Tl	**205**	**27.666**	ug/L	1.106	3	228	750016	0
	Pb	**208**	**27.183**	ug/L	0.995	3	272	972344	0
	Bi	**209**		ug/L			2065247	2004125	3
	Th	**232**	**27.080**	ug/L	0.792	2	1210	924948	0
	U	**238**	**27.608**	ug/L	0.707	2	68	958067	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:06:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	637083	1
[	Be	9	0.563	ug/L	0.039	6	9	1119	5
	C	13		ug/L			57054	84178	2
	Cl	37		ug/L			3021538	3135591	0
[>	Sc	45		ug/L			603049	699787	2
[	V	51	34.598	ug/L	0.463	1	5204	511680	1
[	V-1	51	34.638	ug/L	0.423	1	161	506061	1
[	Cr	52	23.067	ug/L	0.906	3	15338	309860	1
[	Cr	53	23.170	ug/L	0.609	2	120	33217	0
[	Mn	55	524.904	ug/L	19.624	3	851	9165306	1
[	Co	59	7.995	ug/L	0.299	3	76	108445	1
[>	Ge	72		ug/L			436831	460380	1
[	Ni	60	16.041	ug/L	0.026	0	19	44771	1
[	Ni	62	18.411	ug/L	0.644	3	34	7253	2
[	Cu	63	23.280	ug/L	0.225	0	79	145906	1
[	Cu	65	23.347	ug/L	0.367	1	33	66124	2
[	Zn	66	195.850	ug/L	3.355	1	137	326726	0
[	Zn	67	194.480	ug/L	3.119	1	26	52887	1
[	Zn	68	198.573	ug/L	7.276	3	127	238279	2
[	As	75	9.539	ug/L	0.118	1	255	15098	0
[	As-1	75	9.477	ug/L	0.144	1	8509	23687	0
[	Se	82	~0.048	ug/L	0.003	6	6	14	4
[	Se	78	0.023	ug/L	0.151	661	8644	9119	1
[	Mo	98	0.317	ug/L	0.005	1	14	1433	2
	Y	89		ug/L			278872	434559	0
	Kr	83		ug/L			509	661	2
[>	In	115		ug/L			878990	903557	1
[	Ag	107	0.159	ug/L	0.005	3	24	2028	4
[	Cd	111	3.552	ug/L	0.029	0	66	15688	1
[	Cd	114	3.506	ug/L	0.079	2	45	38391	1
[	Sb	121	~0.142	ug/L	0.007	4	270	2267	5
[	Sb	123	0.142	ug/L	0.005	3	194	1721	3
[	Ba	135	165.327	ug/L	0.508	0	45	647741	0
[	Ba	137	163.352	ug/L	2.362	1	76	1105122	0
[>	Tb	159		ug/L			958896	1029231	0
[	Tl	205	0.239	ug/L	0.006	2	228	7342	2
[	Pb	208	142.276	ug/L	1.014	0	272	5569591	0
[	Bi	209		ug/L			2065247	2017134	3
[	Th	232	6.646	ug/L	0.096	1	1210	249425	1
[	U	238	0.788	ug/L	0.003	0	68	29982	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:10:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Zn, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	644623	3
	Be	9	0.535	ug/L	0.026	4	9	1078	5
	C	13		ug/L			57054	82905	1
	Cl	37		ug/L			3021538	3173565	3
>	Sc	45		ug/L			603049	719592	2
	V	51	44.206	ug/L	1.632	3	5204	670496	3
	V-1	51	44.516	ug/L	1.733	3	161	668641	3
	Cr	52	29.603	ug/L	0.853	2	15338	403779	1
	Cr	53	30.583	ug/L	1.163	3	120	45033	2
	Mn	55	577.019	ug/L	3.068	0	851	10365379	1
	Co	59	9.903	ug/L	0.225	2	76	138150	1
>	Ge	72		ug/L			436831	465989	1
	Ni	60	17.384	ug/L	0.063	0	19	49110	1
	Ni	62	20.026	ug/L	0.056	0	34	7985	1
	Cu	63	36.918	ug/L	0.750	2	79	234166	2
	Cu	65	37.205	ug/L	0.679	1	33	106606	0
	Zn	66	360.548	ug/L	6.063	1	137	608688	0
	Zn	67	344.307	ug/L	6.832	1	26	94737	0
	Zn	68	356.740	ug/L	5.710	1	127	433254	0
	As	75	20.714	ug/L	0.527	2	255	32862	1
	As-1	75	20.568	ug/L	0.578	2	8509	41407	0
	Se	82	~0.135	ug/L	0.088	65	6	29	49
	Se	78	-0.154	ug/L	0.307	198	8644	9153	0
	Mo	98	0.237	ug/L	0.007	3	14	1088	1
	Y	89		ug/L			278872	425552	2
	Kr	83		ug/L			509	710	2
>	In	115		ug/L			878990	929813	1
	Ag	107	0.199	ug/L	0.007	3	24	2610	3
	Cd	111	9.206	ug/L	0.142	1	66	41740	2
	Cd	114	9.113	ug/L	0.106	1	45	102614	0
	Sb	121	0.336	ug/L	0.003	0	270	5111	0
	Sb	123	0.344	ug/L	0.014	4	194	3992	2
	Ba	135	123.605	ug/L	1.265	1	45	498333	0
	Ba	137	122.583	ug/L	1.314	1	76	853452	0
>	Tb	159		ug/L			958896	1011445	1
	Tl	205	0.412	ug/L	0.013	3	228	12241	1
	Pb	208	397.071	ug/L	2.646	0	272	15274029	0
	Bi	209		ug/L			2065247	2010359	3
	Th	232	6.675	ug/L	0.092	1	1210	246150	0
	U	238	0.664	ug/L	0.015	2	68	24850	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:15:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	627807	0
	Be	9	0.619	ug/L	0.017	2	9	1214	2
	C	13		ug/L			57054	99387	2
	Cl	37		ug/L			3021538	3184867	1
>	Sc	45		ug/L			603049	690128	2
	V	51	29.331	ug/L	0.815	2	5204	428594	0
	V-1	51	29.344	ug/L	0.691	2	161	422719	0
	Cr	52	28.719	ug/L	0.880	3	15338	376172	0
	Cr	53	28.759	ug/L	1.020	3	120	40628	2
	Mn	55	797.694	ug/L	24.178	3	851	13736539	0
	Co	59	8.467	ug/L	0.384	4	76	113241	2
>	Ge	72		ug/L			436831	458854	1
	Ni	60	19.758	ug/L	0.297	1	19	54952	0
	Ni	62	21.277	ug/L	0.598	2	34	8349	1
	Cu	63	27.827	ug/L	0.452	1	79	173814	1
	Cu	65	27.739	ug/L	0.353	1	33	78282	0
	Zn	66	331.551	ug/L	4.938	1	137	551203	0
	Zn	67	326.018	ug/L	8.827	2	26	88341	2
	Zn	68	329.851	ug/L	5.705	1	127	394481	0
	As	75	12.078	ug/L	0.138	1	255	18983	0
	As-1	75	12.013	ug/L	0.214	1	8509	27533	0
	Se	82	0.105	ug/L	0.081	77	6	24	55
	Se	78	0.074	ug/L	0.297	403	8644	9110	0
	Mo	98	0.291	ug/L	0.003	0	14	1310	2
	Y	89		ug/L			278872	441711	1
	Kr	83		ug/L			509	668	6
>	In	115		ug/L			878990	904173	1
	Ag	107	0.158	ug/L	0.005	2	24	2014	1
	Cd	111	5.749	ug/L	0.162	2	66	25366	2
	Cd	114	5.692	ug/L	0.074	1	45	62331	0
	Sb	121	0.247	ug/L	0.007	2	270	3735	1
	Sb	123	0.242	ug/L	0.002	0	194	2793	1
	Ba	135	221.235	ug/L	6.384	2	45	867153	1
	Ba	137	220.712	ug/L	4.251	1	76	1493989	0
>	Tb	159		ug/L			958896	1035139	1
	Tl	205	0.284	ug/L	0.006	2	228	8705	1
	Pb	208	229.869	ug/L	3.576	1	272	9048952	0
	Bi	209		ug/L			2065247	2052299	4
	Th	232	6.371	ug/L	0.101	1	1210	240520	1
	U	238	0.848	ug/L	0.012	1	68	32452	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 L SWN
Sample Dil Factor: 20
Comments:

rr Ag, Be

Sample Date/Time: Thursday, November 15, 2012 21:19:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	634791	0
	Be	9	0.709	ug/L	0.013	1	9	1402	1
	C	13		ug/L			57054	82537	4
	Cl	37		ug/L			3021538	3186646	0
>	Sc	45		ug/L			603049	713515	2
	V	51	26.540	ug/L	1.328	5	5204	401318	1
	V-1	51	26.862	ug/L	1.123	4	161	399922	1
	Cr	52	20.824	ug/L	1.112	5	15338	286854	2
	Cr	53	21.864	ug/L	0.442	2	120	31967	1
	Mn	55	799.831	ug/L	25.941	3	851	14238033	0
	Co	59	9.299	ug/L	0.482	5	76	128541	2
>	Ge	72		ug/L			436831	460917	0
	Ni	60	21.783	ug/L	0.370	1	19	60867	2
	Ni	62	23.877	ug/L	0.259	1	34	9410	1
	Cu	63	23.571	ug/L	0.331	1	79	147925	2
	Cu	65	24.848	ug/L	0.191	0	33	70445	0
	Zn	66	192.884	ug/L	4.787	2	137	322157	1
	Zn	67	194.346	ug/L	6.469	3	26	52906	2
	Zn	68	193.200	ug/L	1.050	0	127	232172	0
	As	75	11.985	ug/L	0.137	1	255	18924	0
	As-1	75	11.912	ug/L	0.234	1	8509	27502	0
	Se	82	-0.040	ug/L	0.027	67	6	0	1847
	Se	78	0.037	ug/L	0.383	1044	8644	9135	1
	Mo	98	0.381	ug/L	0.005	1	14	1718	1
	Y	89		ug/L			278872	448296	0
	Kr	83		ug/L			509	743	2
>	In	115		ug/L			878990	903323	0
	Ag	107	0.154	ug/L	0.006	3	24	1967	4
	Cd	111	2.884	ug/L	0.021	0	66	12749	0
	Cd	114	2.750	ug/L	0.051	1	45	30112	1
	Sb	121	0.117	ug/L	0.006	5	270	1917	5
	Sb	123	0.116	ug/L	0.005	4	194	1444	2
	Ba	135	183.878	ug/L	2.148	1	45	720205	0
	Ba	137	184.971	ug/L	2.397	1	76	1251056	0
>	Tb	159		ug/L			958896	1032043	1
	Tl	205	0.214	ug/L	0.003	1	228	6605	2
	Pb	208	109.815	ug/L	1.674	1	272	4310341	0
	Bi	209		ug/L			2065247	1991982	0
	Th	232	7.461	ug/L	0.115	1	1210	280602	0
	U	238	1.094	ug/L	0.014	1	68	41741	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 B SWN
Sample Dil Factor: 20
Comments:
rr Ag, Be, Pb
Sample Date/Time: Thursday, November 15, 2012 21:23:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	643323	3
[	Be	9	0.648	ug/L	0.024	3	9	1300	2
	C	13		ug/L			57054	87482	2
	Cl	37		ug/L			3021538	3156524	4
[>	Sc	45		ug/L			603049	696089	1
[	V	51	29.593	ug/L	0.631	2	5204	436164	0
[	V-1	51	30.253	ug/L	0.793	2	161	439600	1
[	Cr	52	54.022	ug/L	1.912	3	15338	698182	1
[	Cr	53	56.238	ug/L	2.009	3	120	79993	1
[	Mn	55	1111.511	ug/L	28.696	2	851	19309081	1
[	Co	59	9.368	ug/L	0.211	2	76	126419	1
[>	Ge	72		ug/L			436831	459664	1
[	Ni	60	35.643	ug/L	0.470	1	19	99303	1
[	Ni	62	38.162	ug/L	0.597	1	34	14977	2
[	Cu	63	26.005	ug/L	0.439	1	79	162729	2
[	Cu	65	26.563	ug/L	0.190	0	33	75099	0
[	Zn	66	271.190	ug/L	3.955	1	137	451717	1
[	Zn	67	273.458	ug/L	2.539	0	26	74243	1
[	Zn	68	279.919	ug/L	6.698	2	127	335359	1
[	As	75	15.060	ug/L	0.285	1	255	23644	0
[	As-1	75	15.031	ug/L	0.324	2	8509	32263	0
[	Se	82	0.002	ug/L	0.090	3605	6	7	215
[	Se	78	0.169	ug/L	0.137	81	8644	9168	0
[	Mo	98	0.361	ug/L	0.013	3	14	1624	4
	Y	89		ug/L			278872	416074	1
	Kr	83		ug/L			509	709	4
[>	In	115		ug/L			878990	909213	0
[	Ag	107	0.225	ug/L	0.004	1	24	2878	2
[	Cd	111	5.508	ug/L	0.134	2	66	24443	2
[	Cd	114	5.468	ug/L	0.077	1	45	60228	1
[	Sb	121	0.141	ug/L	0.016	11	270	2263	9
[	Sb	123	0.152	ug/L	0.027	17	194	1833	15
[	Ba	135	387.752	ug/L	5.475	1	45	1528638	1
[	Ba	137	392.451	ug/L	1.553	0	76	2671802	0
[>	Tb	159		ug/L			958896	1013175	0
[	Tl	205	0.303	ug/L	0.005	1	228	9085	1
[	Pb	208	307.350	ug/L	0.621	0	272	11843813	0
[	Bi	209		ug/L			2065247	2013961	2
[	Th	232	4.724	ug/L	0.078	1	1210	174883	1
[	U	238	1.193	ug/L	0.028	2	68	44687	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:27:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	652663	2
[	**Be**	**9**	**0.471**	ug/L	0.013	2	9	963	4
	C	**13**		ug/L			57054	84531	2
	Cl	**37**		ug/L			3021538	3207311	1
[>	**Sc**	**45**		ug/L			603049	685555	1
[	**V**	**51**	**18.195**	ug/L	0.560	3	5204	266379	1
[	**V-1**	**51**	**18.370**	ug/L	0.529	2	161	262972	1
[	**Cr**	**52**	**13.358**	ug/L	0.642	4	15338	183124	2
[	**Cr**	**53**	**13.920**	ug/L	0.482	3	120	19603	1
[	**Mn**	**55**	**523.722**	ug/L	2.934	0	851	8963032	1
[	**Co**	**59**	**5.883**	ug/L	0.188	3	76	78211	2
[>	**Ge**	**72**		ug/L			436831	458745	0
[	**Ni**	**60**	**14.289**	ug/L	0.312	2	19	39738	1
[	**Ni**	**62**	**15.336**	ug/L	0.245	1	34	6028	1
[	**Cu**	**63**	**17.386**	ug/L	0.242	1	79	108599	0
[	**Cu**	**65**	**17.844**	ug/L	0.583	3	33	50353	2
[	**Zn**	**66**	**191.139**	ug/L	3.828	2	137	317756	1
[	**Zn**	**67**	**184.204**	ug/L	3.579	1	26	49914	1
[	**Zn**	**68**	**189.967**	ug/L	1.510	0	127	227220	1
[	**As**	**75**	**12.381**	ug/L	0.191	1	255	19448	0
[	**As-1**	**75**	**12.379**	ug/L	0.279	2	8509	28095	0
[	**Se**	**82**	**<0.067**	ug/L	0.126	187	6	17	118
[	**Se**	**78**	**0.216**	ug/L	0.364	168	8644	9169	1
[	**Mo**	**98**	**0.217**	ug/L	0.011	5	14	981	4
	Y	**89**		ug/L			278872	395601	2
	Kr	**83**		ug/L			509	641	4
[>	**In**	**115**		ug/L			878990	905886	1
[	**Ag**	**107**	**0.121**	ug/L	0.008	6	24	1550	4
[	**Cd**	**111**	**3.603**	ug/L	0.070	1	66	15952	0
[	**Cd**	**114**	**3.553**	ug/L	0.137	3	45	38991	2
[	**Sb**	**121**	**<0.146**	ug/L	0.008	5	270	2315	3
[	**Sb**	**123**	**0.141**	ug/L	0.006	4	194	1713	1
[	**Ba**	**135**	**161.768**	ug/L	2.621	1	45	635327	0
[	**Ba**	**137**	**160.412**	ug/L	5.522	3	76	1087689	1
[>	**Tb**	**159**		ug/L			958896	1002831	1
[	**Tl**	**205**	**<0.175**	ug/L	0.003	1	228	5304	0
[	**Pb**	**208**	**131.239**	ug/L	1.996	1	272	5005105	0
[	**Bi**	**209**		ug/L			2065247	2018312	3
[	**Th**	**232**	**5.026**	ug/L	0.147	2	1210	184049	1
[	**U**	**238**	**0.843**	ug/L	0.025	2	68	31261	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:32:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	653775	1
	Be	9	0.566	ug/L	0.019	3	9	1154	1
	C	13		ug/L			57054	88180	0
	Cl	37		ug/L			3021538	3192451	2
>	Sc	45		ug/L			603049	689360	0
	V	51	25.239	ug/L	0.115	0	5204	369379	0
	V-1	51	25.559	ug/L	0.165	0	161	367939	0
	Cr	52	30.341	ug/L	0.254	0	15338	396155	0
	Cr	53	31.398	ug/L	0.809	2	120	44304	1
	Mn	55	770.463	ug/L	15.432	2	851	13258461	1
	Co	59	8.881	ug/L	0.234	2	76	118706	1
>	Ge	72		ug/L			436831	462688	1
	Ni	60	24.190	ug/L	0.360	1	19	67837	0
	Ni	62	25.864	ug/L	0.503	1	34	10227	0
	Cu	63	23.596	ug/L	0.481	2	79	148649	2
	Cu	65	23.934	ug/L	0.608	2	33	68107	1
	Zn	66	383.476	ug/L	7.059	1	137	642815	1
	Zn	67	370.251	ug/L	10.096	2	26	101149	1
	Zn	68	381.800	ug/L	8.868	2	127	460405	1
	As	75	17.655	ug/L	0.222	1	255	27854	0
	As-1	75	17.627	ug/L	0.304	1	8509	36527	0
	Se	82	0.111	ug/L	0.065	59	6	25	43
	Se	78	0.191	ug/L	0.364	191	8644	9237	0
	Mo	98	0.322	ug/L	0.008	2	14	1460	1
	Y	89		ug/L			278872	395393	0
	Kr	83		ug/L			509	669	3
>	In	115		ug/L			878990	947713	0
	Ag	107	0.267	ug/L	0.003	1	24	3551	1
	Cd	111	7.602	ug/L	0.073	0	66	35140	1
	Cd	114	7.487	ug/L	0.127	1	45	85934	0
	Sb	121	0.237	ug/L	0.002	0	270	3763	1
	Sb	123	0.232	ug/L	0.005	1	194	2810	2
	Ba	135	189.764	ug/L	1.353	0	45	779802	0
	Ba	137	185.530	ug/L	1.396	0	76	1316577	0
>	Tb	159		ug/L			958896	1019150	0
	Tl	205	0.380	ug/L	0.007	1	228	11393	1
	Pb	208	396.198	ug/L	2.936	0	272	15357254	0
	Bi	209		ug/L			2065247	2028655	2
	Th	232	5.673	ug/L	0.035	0	1210	211017	0
	U	238	0.534	ug/L	0.007	1	68	20169	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:36:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	660625	2
[	Be	9	0.612	ug/L	0.016	2	9	1262	0
	C	13		ug/L			57054	84407	2
	Cl	37		ug/L			3021538	3210669	1
[>	Sc	45		ug/L			603049	708851 ✓	1
[	V	51	22.776	ug/L	0.628	2	5204	343256	1
[	V-1	51	22.986	ug/L	0.561	2	161	340186	0
[	Cr	52	22.034	ug/L	0.584	2	15338	300725	1
[	Cr	53	22.717	ug/L	0.612	2	120	33000	2
[	Mn	55	1026.895	ug/L	6.639	0	851	18172353	2
[	Co	59	7.515	ug/L	0.304	4	76	103265	2
[>	Ge	72		ug/L			436831	471237 ✓	3
[	Ni	60	23.348	ug/L	0.615	2	19	66661	1
[	Ni	62	25.157	ug/L	1.738	6	34	10121	4
[	Cu	63	30.763	ug/L	0.770	2	79	197280	2
[	Cu	65	31.129	ug/L	1.524	4	33	90128	1
[	Zn	66	493.972	ug/L	27.434	5	137	842409	2
[	Zn	67	454.946	ug/L	17.304	3	26	126505	0
[	Zn	68	481.211	ug/L	19.616	4	127	590608	2
[	As	75	16.873	ug/L	0.513	3	255	27111	0
[	As-1	75	16.747	ug/L	0.686	4	8509	35784	0
[	Se	82	0.263	ug/L	0.061	23	6	52	17
[	Se	78	0.057	ug/L	0.713	1252	8644	9343	0
[	Mo	98	0.421	ug/L	0.025	5	14	1938	2
	Y	89		ug/L			278872	437613	2
	Kr	83		ug/L			509	719	1
[>	In	115		ug/L			878990	928162	0
[	Ag	107	0.249	ug/L	0.005	1	24	3243	1
[	Cd	111	8.745	ug/L	0.121	1	66	39577	0
[	Cd	114	8.539	ug/L	0.080	0	45	95977	0
[	Sb	121	0.262	ug/L	0.007	2	270	4039	2
[	Sb	123	0.276	ug/L	0.013	4	194	3233	3
[	Ba	135	280.954	ug/L	4.432	1	45	1130643	1
[	Ba	137	278.811	ug/L	6.038	2	76	1937532	1
[>	Tb	159		ug/L			958896	1033812	1
[	Tl	205	0.381	ug/L	0.014	3	228	11609	2
[	Pb	208	301.659	ug/L	4.591	1	272	11859632	0
[	Bi	209		ug/L			2065247	2051679	4
[	Th	232	4.880	ug/L	0.039	0	1210	184295	0
[	U	238	0.725	ug/L	0.017	2	68	27737	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:40:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	616483	1
[	Be	9	55.576	ug/L	2.923	5	9	106116	3
	C	13		ug/L			57054	58848	2
	Cl	37		ug/L			3021538	3150251	1
[>	Sc	45		ug/L			603049	643028	1
[	V	51	49.820	ug/L	0.832	1	5204	674616	0
[	V-1	51	50.171	ug/L	0.982	1	161	673446	0
[	Cr	52	50.646	ug/L	0.930	1	15338	605818	0
[	Cr	53	51.796	ug/L	2.086	4	120	68083	3
[	Mn	55	50.170	ug/L	0.811	1	851	806097	0
[	Co	59	51.262	ug/L	1.457	2	76	638682	1
[>	Ge	72		ug/L			436831	461004	1
[	Ni	60	48.188	ug/L	0.909	1	19	134606	0
[	Ni	62	48.875	ug/L	1.530	3	34	19220	1
[	Cu	63	48.715	ug/L	1.715	3	79	305566	2
[	Cu	65	50.114	ug/L	0.467	0	33	142061	1
[	Zn	66	49.304	ug/L	1.859	3	137	82447	2
[	Zn	67	51.467	ug/L	1.080	2	26	14033	0
[	Zn	68	49.986	ug/L	0.926	1	127	60167	0
[	As	75	49.467	ug/L	1.070	2	255	77261	0
[	As-1	75	49.682	ug/L	1.243	2	8509	86234	0
[	Se	82	50.224	ug/L	0.736	1	6	8518	0
[	Se	78	50.984	ug/L	1.271	2	8644	31011	0
[	Mo	98	44.266	ug/L	0.504	1	14	198080	1
	Y	89		ug/L			278872	303749	0
	Kr	83		ug/L			509	548	3
[>	In	115		ug/L			878990	870990	1
[	Ag	107	40.516	ug/L	1.634	4	24	492044	2
[	Cd	111	50.687	ug/L	1.055	2	66	214912	1
[	Cd	114	50.694	ug/L	1.216	2	45	534397	1
[	Sb	121	50.374	ug/L	1.664	3	270	678078	1
[	Sb	123	49.806	ug/L	1.368	2	194	513802	1
[	Ba	135	50.102	ug/L	1.225	2	45	189212	1
[	Ba	137	49.432	ug/L	1.149	2	76	322381	0
[>	Tb	159		ug/L			958896	966250	0
[	Tl	205	51.459	ug/L	0.678	1	228	1433542	1
[	Pb	208	50.654	ug/L	0.699	1	272	1861693	0
[	Bi	209		ug/L			2065247	1946675	1
[	Th	232	51.835	ug/L	0.411	0	1210	1818073	0
[	U	238	53.203	ug/L	0.515	0	68	1896780	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:47:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	607953 ✓	1
[	Be	9	0.004	ug/L	0.004	99	9	15	42
	C	13		ug/L			57054	59001	3
	Cl	37		ug/L			3021538	3148004	5
[>	Sc	45		ug/L			603049	623896 ✓	2
[	V	51	0.004	ug/L	0.012	301	5204	5433	1
[	V-1	51	0.001	ug/L	0.006	1091	161	173	46
[	Cr	52	-0.001	ug/L	0.028	3090	15338	15853	0
[	Cr	53	-0.012	ug/L	0.005	39	120	109	5
[	Mn	55	0.129	ug/L	0.142	110	851	2867	74
[	Co	59	0.003	ug/L	0.004	118	76	120	39
[>	Ge	72		ug/L			436831	446773 ✓	2
[	Ni	60	0.008	ug/L	0.007	85	19	42	46
[	Ni	62	0.018	ug/L	0.022	125	34	41	18
[	Cu	63	0.008	ug/L	0.007	92	79	128	34
[	Cu	65	0.010	ug/L	0.008	86	33	60	39
[	Zn	66	0.072	ug/L	0.056	78	137	257	36
[	Zn	67	0.049	ug/L	0.050	100	26	40	33
[	Zn	68	0.074	ug/L	0.068	91	127	217	37
[	As	75	0.005	ug/L	0.019	381	255	269	11
[	As-1	75	0.166	ug/L	0.139	83	8509	8951	0
[	Se	82	0.033	ug/L	0.073	221	6	11	102
[	Se	78	0.590	ug/L	0.478	81	8644	9084	0
[	Mo	98	0.008	ug/L	0.001	11	14	47	8
	Y	89		ug/L			278872	295538	0
	Kr	83		ug/L			509	508	4
[>	In	115		ug/L			878990	848929 ✓	1
[	Ag	107	0.003	ug/L	0.002	75	24	53	42
[	Cd	111	0.005	ug/L	0.006	142	66	83	30
[	Cd	114	0.004	ug/L	0.004	96	45	81	45
[	Sb	121	0.039	ug/L	0.002	6	270	772	4
[	Sb	123	0.042	ug/L	0.002	5	194	609	4
[	Ba	135	0.044	ug/L	0.041	92	45	206	72
[	Ba	137	0.045	ug/L	0.038	84	76	358	67
[>	Tb	159		ug/L			958896	919765 ✓	1
[	Tl	205	-0.001	ug/L	0.002	177	228	189	26
[	Pb	208	0.051	ug/L	0.046	89	272	2047	76
[	Bi	209		ug/L			2065247	1956007	0
[	Th	232	0.067	ug/L	0.007	10	1210	3398	5
[	U	238	0.003	ug/L	0.002	84	68	163	50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
ZZ		ZZZZZZ			Sc high
		ICSAB			^{62}Ni high
		LR200			Ag, Mo high
		LR300			
		B1			
		B2			
		ICSA			
		B3			
		CCV2			Mo, Ag high
		CCB2			
		VR32 MB1	SWN	20	Be
		↓ MB1SPK	↓	↓ ✓	↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 2 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 E	SWN	20	Be
		F	↓	↓	↓
		G			
		H			
		I			
		J			
		K			
		L			
		CCV3			
		CCB3			
		VR32 A-L	SWN	100	Be rr Ag
		A		20	
		ADUP		↓	
		ASPK		↓	
		B			
		C			
		D		↓	↓ ↓
		E		100	V, Cr, Co
		F		20	Be; rr Ag
		G	↓	↓	↓ ↓
		CCV4			
		CCB4			
		VR33 MB1	SWN	20	Be; rr Ag
		↓ MB1SPK	↓	↓	↓ ↓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR32 1+	SWN	20	Be; rr Ag
		I	↓	↓	↓
		J			
		K			
		L		100	Pb Zn ; rr V, Cr, Co
		L		20	Be; rr Ag
		VR33 B		↓	↓
		C			
		CCV5			Sc high
		CCB5			↓
		VR33 A-L	SWN	500 ✓	Pb Zn
		A		100	↓
		ADUP		↓ ✓	
		ASPK			
		C			↓ rr V, Cr, Co
		E		↓	Zn
		I		20	Be; rr Ag
		J		100	Pb Zn
		J		20	Be; rr Ag
		VR32 E	↓	↓	↓
		CCV6			Sc high, Co low
		CCB6			↓
		VR34 MB1	SWN	20	Be; rr Ag
		↓ MB1SPK	↓	L	↓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 4 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR33 K	SWN	100	Zn
		K		20	Be; rr Ag
		L		↓	↓
		VR34 B		100	Pb
		B		20	Be; rr Ag
		C		↓	↓
		D		100	Pb Zn
		D		20	Be; rr Ag
		CCV7			Sc high; Co low
		CCB7			↓
		VR34 E	SWN	100	Pb Zn
		E		20	Be; rr Ag
		H		100	Zn
		H		20	Be; rr Ag
		I		100	Pb Zn
		I		20	Be; rr Ag
		J		100	Pb Zn
		J		20	Be; rr Ag
		K		100	Pb Zn
		VR73 A	REN	20	rr Mn (Zn)
		CCV8			Sc high; Mn, Co low
		CCB8			↓ End PKG
		Rinse			
		DI			

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, November 16, 2012 11:38:53
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1285
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3189.9	3189.877	19.383	0.6	Standard
	Mg	24.0	31573.0	31573.041	443.254	1.4	Standard
	In	114.9	68795.9	68795.880	429.402	0.6	Standard
	Pb	208.0	30196.8	30196.814	219.529	0.7	Standard
	U	238.1	53059.5	53059.527	481.866	0.9	Standard
[	CeO	155.9	1437.3	0.021	0.000	2.3	Standard
| >	Ce	139.9	69221.8	69221.779	197.514	0.3	Standard
[	Ce++	70.0	733.0	0.011	0.000	1.4	Standard
	Bkgd	220.0	0.2	0.167	0.118	70.7	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

ɔtimization Summary

ɱartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:38:51 AM
ɪd Time: 11/16/2012 11:41:27 AM

ɜily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3189.88
Obtained Intensity (Mg 23.985): 31573.04
Obtained Intensity (In 114.904): 68795.88
Obtained Intensity (Pb 207.977): 30196.81
Obtained Intensity (U 238.05): 53059.53
Obtained Intensity (Bkgd 220): 0.17
Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1437.32 / 69221.78)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=733.03 / 69221.78)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:00:20 AM
nd Time: 11/16/2012 11:03:02 AM

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.711)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.702)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:04:18 AM
nd Time: 11/16/2012 11:08:29 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.999; Intercept = -10.68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:45:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				681751	0
	Be	9		ug/L				8	24
	C	13		ug/L				63994	1
	Cl	37		ug/L				3532807	0
>	Sc	45		ug/L				674505	2
	V	51		ug/L				6013	1
	V-1	51		ug/L				387	3
	Cr	52		ug/L				17778	2
	Cr	53		ug/L				210	7
	Mn	55		ug/L				314	2
	Co	59		ug/L				73	20
>	Ge	72		ug/L				426798	1
	Ni	60		ug/L				26	10
	Ni	62		ug/L				48	17
	Cu	63		ug/L				88	30
	Cu	65		ug/L				42	20
	Zn	66		ug/L				141	4
	Zn	67		ug/L				21	9
	Zn	68		ug/L				144	11
	As	75		ug/L				220	2
	As-1	75		ug/L				9153	0
	Se	82		ug/L				-1	888
	Se	78		ug/L				9315	0
	Mo	98		ug/L				35	11
	Y	89		ug/L				271155	0
	Kr	83		ug/L				529	5
>	In	115		ug/L				840042	0
	Ag	107		ug/L				32	23
	Cd	111		ug/L				72	14
	Cd	114		ug/L				44	20
	Sb	121		ug/L				346	17
	Sb	123		ug/L				257	13
	Ba	135		ug/L				17	24
	Ba	137		ug/L				19	9
>	Tb	159		ug/L				1001666	0
	Tl	205		ug/L				206	31
	Pb	208		ug/L				157	11
	Bi	209		ug/L				2293546	0
	Th	232		ug/L				1512	1
	U	238		ug/L				29	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:49:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	678848	1
	Be	9	0.200	ug/L	0.006	2	8	505	1
	C	13		ug/L			63994	65432	1
	Cl	37		ug/L			3532807	3545982	3
>	Sc	45		ug/L			674505	680274	0
	V	51	0.200	ug/L	0.021	10	6013	8785	3
	V-1	51	0.200	ug/L	0.003	1	387	3194	1
	Cr	52	0.500	ug/L	0.037	7	17778	23649	2
	Cr	53	0.500	ug/L	0.036	7	210	884	5
	Mn	55	0.500	ug/L	0.007	1	314	8394	1
	Co	59	0.200	ug/L	0.007	3	73	2642	3
>	Ge	72		ug/L			426798	428590	0
	Ni	60	0.500	ug/L	0.022	4	26	1458	3
	Ni	62	0.500	ug/L	0.050	9	48	231	7
	Cu	63	0.500	ug/L	0.013	2	88	3319	2
	Cu	65	0.500	ug/L	0.008	1	42	1474	1
	Zn	66	4.000	ug/L	0.038	0	141	6841	0
	Zn	67	4.000	ug/L	0.194	4	21	1040	4
	Zn	68	4.000	ug/L	0.111	2	144	4849	3
	As	75	0.200	ug/L	0.007	3	220	539	1
	As-1	75	0.200	ug/L	0.070	35	9153	9376	0
	Se	82	0.500	ug/L	0.010	2	-1	87	2
	Se	78	0.500	ug/L	0.258	51	9315	9443	0
	Mo	98	0.200	ug/L	0.015	7	35	777	7
	Y	89		ug/L			271155	271780	1
	Kr	83		ug/L			529	523	1
>	In	115		ug/L			840042	841036	0
	Ag	107	0.200	ug/L	0.006	3	32	2472	2
	Cd	111	0.100	ug/L	0.006	6	72	514	5
	Cd	114	0.100	ug/L	0.004	4	44	1157	3
	Sb	121	0.200	ug/L	0.004	1	346	2773	1
	Sb	123	0.200	ug/L	0.005	2	257	2116	1
	Ba	135	0.500	ug/L	0.016	3	17	1922	2
	Ba	137	0.500	ug/L	0.003	0	19	3256	0
>	Tb	159		ug/L			1001666	1004484	0
	Tl	205	0.200	ug/L	0.004	1	206	6732	1
	Pb	208	0.100	ug/L	0.002	1	157	4576	2
	Bi	209		ug/L			2293546	2285482	0
	Th	232	0.200	ug/L	0.007	3	1512	7425	3
	U	238	0.200	ug/L	0.000	0	29	8335	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:54:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	690004	1
[	Be	9	10.000	ug/L	0.218	2	8	24663	0
	C	13		ug/L			63994	64386	2
	Cl	37		ug/L			3532807	3627720	2
[>	Sc	45		ug/L			674505	693621	0
[	V	51	10.000	ug/L	0.128	1	6013	140550	1
[	V-1	51	10.000	ug/L	0.110	1	387	135671	0
[	Cr	52	10.000	ug/L	0.094	0	17778	136788	1
[	Cr	53	10.000	ug/L	0.185	1	210	13896	1
[	Mn	55	10.000	ug/L	0.186	1	314	164566	1
[	Co	59	10.000	ug/L	0.235	2	73	126725	1
[>	Ge	72		ug/L			426798	436937	1
[	Ni	60	9.999	ug/L	0.243	2	26	27972	3
[	Ni	62	10.001	ug/L	0.238	2	48	4001	1
[	Cu	63	9.999	ug/L	0.076	0	88	63348	0
[	Cu	65	9.999	ug/L	0.123	1	42	28630	0
[	Zn	66	9.982	ug/L	0.152	1	141	17000	1
[	Zn	67	10.082	ug/L	0.082	0	21	2783	0
[	Zn	68	10.020	ug/L	0.111	1	144	12319	2
[	As	75	10.000	ug/L	0.134	1	220	15204	0
[	As-1	75	10.001	ug/L	0.223	2	9153	24303	0
[	Se	82	9.997	ug/L	0.250	2	-1	1656	1
[	Se	78	10.014	ug/L	0.607	6	9315	13704	0
[	Mo	98	10.000	ug/L	0.111	1	35	38569	1
	Y	89		ug/L			271155	275843	1
	Kr	83		ug/L			529	544	4
[>	In	115		ug/L			840042	854316	0
[	Ag	107	10.000	ug/L	0.211	2	32	116515	1
[	Cd	111	10.000	ug/L	0.116	1	72	44007	1
[	Cd	114	10.000	ug/L	0.068	0	44	108341	0
[	Sb	121	10.000	ug/L	0.047	0	346	131416	0
[	Sb	123	10.000	ug/L	0.084	0	257	100706	0
[	Ba	135	9.999	ug/L	0.076	0	17	37726	0
[	Ba	137	10.000	ug/L	0.123	1	19	65463	1
[>	Tb	159		ug/L			1001666	1032266	0
[	Tl	205	10.000	ug/L	0.109	1	206	316714	1
[	Pb	208	10.000	ug/L	0.053	0	157	416417	0
[	Bi	209		ug/L			2293546	2310164	0
[	Th	232	10.001	ug/L	0.104	1	1512	373350	0
[	U	238	10.000	ug/L	0.196	1	29	410875	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:58:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	698058	0
[	Be	9	19.939	ug/L	0.303	1	8	49153	1
	C	13		ug/L			63994	63964	2
	Cl	37		ug/L			3532807	3597639	2
[>	Sc	45		ug/L			674505	700457	1
[	V	51	20.040	ug/L	0.645	3	6013	280327	3
[	V-1	51	20.030	ug/L	0.714	3	387	275688	3
[	Cr	52	19.982	ug/L	0.255	1	17778	256694	1
[	Cr	53	19.952	ug/L	0.175	0	210	27523	0
[	Mn	55	19.941	ug/L	0.295	1	314	327267	2
[	Co	59	19.906	ug/L	0.351	1	73	250003	0
[>	Ge	72		ug/L			426798	434992	0
[	Ni	60	19.853	ug/L	0.104	0	26	53689	1
[	Ni	62	19.969	ug/L	0.298	1	48	7857	1
[	Cu	63	20.002	ug/L	0.387	1	88	126105	1
[	Cu	65	20.025	ug/L	0.383	1	42	57316	1
[	Zn	66	19.910	ug/L	0.244	1	141	33099	0
[	Zn	67	20.070	ug/L	0.530	2	21	5560	2
[	Zn	68	19.906	ug/L	0.272	1	144	23832	0
[	As	75	19.990	ug/L	0.017	0	220	29980	0
[	As-1	75	20.000	ug/L	0.021	0	9153	39065	0
[	Se	82	19.974	ug/L	0.346	1	-1	3279	1
[	Se	78	20.016	ug/L	0.207	1	9315	17816	0
[	Mo	98	20.020	ug/L	0.203	1	35	77142	0
	Y	89		ug/L			271155	277399	0
	Kr	83		ug/L			529	550	5
[>	In	115		ug/L			840042	848651	2
[	Ag	107	20.042	ug/L	0.625	3	32	233848	2
[	Cd	111	19.950	ug/L	0.396	1	72	86245	0
[	Cd	114	19.942	ug/L	0.353	1	44	212106	1
[	Sb	121	20.006	ug/L	0.450	2	346	261036	0
[	Sb	123	19.982	ug/L	0.463	2	257	198873	0
[	Ba	135	20.031	ug/L	0.302	1	17	75514	0
[	Ba	137	20.028	ug/L	0.375	1	19	130917	0
[>	Tb	159		ug/L			1001666	1019517	1
[	Tl	205	20.014	ug/L	0.262	1	206	627640	1
[	Pb	208	19.999	ug/L	0.296	1	157	822129	0
[	Bi	209		ug/L			2293546	2269096	0
[	Th	232	20.089	ug/L	0.319	1	1512	752562	0
[	U	238	19.998	ug/L	0.323	1	29	811192	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:03:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	689998	1
[	Be	9	49.998	ug/L	0.961	1	8	121778	1
	C	13		ug/L			63994	64041	1
	Cl	37		ug/L			3532807	3745894	1
[>	Sc	45		ug/L			674505	693960	0
[	V	51	49.986	ug/L	1.203	2	6013	682651	2
[	V-1	51	49.965	ug/L	0.712	1	387	678427	1
[	Cr	52	49.987	ug/L	0.103	0	17778	608024	0
[	Cr	53	49.919	ug/L	1.695	3	210	67355	3
[	Mn	55	50.101	ug/L	1.217	2	314	822363	2
[	Co	59	50.046	ug/L	0.343	0	73	625531	0
[>	Ge	72		ug/L			426798	430617	0
[	Ni	60	50.060	ug/L	2.045	4	26	134751	3
[	Ni	62	49.968	ug/L	0.902	1	48	19326	1
[	Cu	63	49.841	ug/L	0.494	0	88	306080	0
[	Cu	65	49.832	ug/L	1.118	2	42	138811	2
[	Zn	66	49.889	ug/L	0.959	1	141	81025	1
[	Zn	67	49.847	ug/L	0.368	0	21	13442	0
[	Zn	68	49.849	ug/L	1.244	2	144	58013	2
[	As	75	49.977	ug/L	0.844	1	220	73688	1
[	As-1	75	49.982	ug/L	0.781	1	9153	82661	1
[	Se	82	49.897	ug/L	0.564	1	-1	8029	0
[	Se	78	49.914	ug/L	0.641	1	9315	29769	0
[	Mo	98	49.990	ug/L	0.682	1	35	190442	0
	Y	89		ug/L			271155	273448	1
	Kr	83		ug/L			529	549	7
[>	In	115		ug/L			840042	823819	0
[	Ag	107	49.775	ug/L	1.011	2	32	551472	1
[	Cd	111	50.015	ug/L	0.224	0	72	210156	0
[	Cd	114	50.070	ug/L	0.284	0	44	520620	0
[	Sb	121	50.143	ug/L	0.183	0	346	643993	0
[	Sb	123	50.076	ug/L	0.188	0	257	487265	0
[	Ba	135	50.167	ug/L	0.125	0	17	186719	0
[	Ba	137	50.132	ug/L	0.216	0	19	322401	0
[>	Tb	159		ug/L			1001666	1004937	0
[	Tl	205	49.952	ug/L	0.667	1	206	1536310	0
[	Pb	208	49.980	ug/L	0.557	1	157	2021099	0
[	Bi	209		ug/L			2293546	2197296	0
[	Th	232	50.210	ug/L	0.647	1	1512	1891500	0
[	U	238	50.469	ug/L	0.511	1	29	2117328	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:09:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	668251	1
	Be	9	99.918	ug/L	1.781	1	8	235086	2
	C	13		ug/L			63994	64099	3
	Cl	37		ug/L			3532807	3711465	0
>	Sc	45		ug/L			674505	677060	1
	V	51	100.456	ug/L	1.993	1	6013	1352528	0
	V-1	51	100.617	ug/L	1.806	1	387	1360181	0
	Cr	52	100.191	ug/L	2.506	2	17778	1178123	0
	Cr	53	100.716	ug/L	2.527	2	210	135575	1
	Mn	55	99.879	ug/L	1.927	1	314	1592528	0
	Co	59	100.079	ug/L	1.965	1	73	1223369	1
>	Ge	72		ug/L			426798	422829	2
	Ni	60	99.908	ug/L	3.597	3	26	263133	1
	Ni	62	99.696	ug/L	2.242	2	48	37425	0
	Cu	63	99.436	ug/L	4.016	4	88	588131	2
	Cu	65	99.133	ug/L	2.521	2	42	263400	0
	Zn	66	99.077	ug/L	4.016	4	141	153081	1
	Zn	67	99.572	ug/L	1.823	1	21	25975	2
	Zn	68	99.395	ug/L	4.037	4	144	111148	1
	As	75	99.721	ug/L	3.049	3	220	142770	0
	As-1	75	99.837	ug/L	3.004	3	9153	152243	0
	Se	82	99.780	ug/L	3.025	3	-1	15647	1
	Se	78	100.209	ug/L	2.886	2	9315	49652	1
	Mo	98	99.944	ug/L	2.718	2	35	372988	0
	Y	89		ug/L			271155	272249	0
	Kr	83		ug/L			529	597	2
>	In	115		ug/L			840042	814550	0
	Ag	107	99.079	ug/L	3.173	3	32	1053014	3
	Cd	111	99.293	ug/L	0.142	0	72	402968	0
	Cd	114	99.414	ug/L	1.144	1	44	1002463	1
	Sb	121	99.528	ug/L	0.112	0	346	1243952	0
	Sb	123	99.597	ug/L	0.827	0	257	945268	0
	Ba	135	99.865	ug/L	1.141	1	17	365838	1
	Ba	137	99.897	ug/L	0.104	0	19	633031	0
>	Tb	159		ug/L			1001666	996124	0
	Tl	205	100.694	ug/L	0.444	0	206	3142546	0
	Pb	208	99.851	ug/L	0.952	0	157	3982796	1
	Bi	209		ug/L			2293546	2133650	0
	Th	232	100.783	ug/L	0.381	0	1512	3862786	0
	U	238	99.667	ug/L	0.511	0	29	4099300	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:16:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662492	2
	Be	9	0.005	ug/L	0.005	118	8	19	64
	C	13		ug/L			63994	63519	1
	Cl	37		ug/L			3532807	3610386	2
>	Sc	45		ug/L			674505	676674	0
	V	51	0.019	ug/L	0.017	87	6013	6286	4
	V-1	51	-0.012	ug/L	0.010	79	387	228	57
	Cr	52	0.057	ug/L	0.043	75	17778	18493	3
	Cr	53	-0.043	ug/L	0.016	37	210	152	14
	Mn	55	0.005	ug/L	0.009	176	314	395	35
	Co	59	0.005	ug/L	0.006	127	73	129	55
>	Ge	72		ug/L			426798	420811	0
	Ni	60	0.004	ug/L	0.010	249	26	35	69
	Ni	62	0.144	ug/L	0.074	51	48	101	26
	Cu	63	0.013	ug/L	0.009	71	88	162	32
	Cu	65	0.001	ug/L	0.006	755	42	43	33
	Zn	66	-0.002	ug/L	0.008	465	141	137	8
	Zn	67	0.002	ug/L	0.005	196	21	21	5
	Zn	68	-0.007	ug/L	0.011	144	144	133	8
	As	75	0.006	ug/L	0.008	132	220	226	4
	As-1	75	0.101	ug/L	0.092	91	9153	9168	0
	Se	82	-0.096	ug/L	0.015	15	-1	-16	14
	Se	78	0.314	ug/L	0.339	107	9315	9310	0
	Mo	98	0.011	ug/L	0.002	18	35	76	9
	Y	89		ug/L			271155	269348	1
	Kr	83		ug/L			529	559	2
>	In	115		ug/L			840042	811042	0
	Ag	107	0.003	ug/L	0.001	19	32	63	10
	Cd	111	0.002	ug/L	0.003	145	72	79	17
	Cd	114	0.000	ug/L	0.001	1167	44	44	27
	Sb	121	0.097	ug/L	0.014	14	346	1538	11
	Sb	123	0.096	ug/L	0.016	16	257	1150	12
	Ba	135	0.001	ug/L	0.000	29	17	21	7
	Ba	137	0.002	ug/L	0.001	28	19	31	12
>	Tb	159		ug/L			1001666	975555	0
	Tl	205	0.021	ug/L	0.014	64	206	855	50
	Pb	208	0.001	ug/L	0.000	52	157	178	7
	Bi	209		ug/L			2293546	2236453	0
	Th	232	0.141	ug/L	0.008	5	1512	6770	3
	U	238	0.003	ug/L	0.001	20	29	135	16

Sample Information

Sample Date/Time: Friday, November 16, 2012 15:16:05
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**0.9999**	0.020	0.20	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.024	0.50	10	20	50	100
Co	59	**1.0000**	0.018	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9998**	0.013	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.038	0.20	10	20	50	100
U	238	**0.9999**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:22:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	690403	1
[	Be	9	49.894	ug/L	0.683	1	8	121266	0
	C	13		ug/L			63994	67900	1
	Cl	37		ug/L			3532807	3629687	1
[>	Sc	45		ug/L			674505	703247	3
[	V	51	50.500	ug/L	1.863	3	6013	708946	0
[	V-1	51	49.902	ug/L	1.813	3	387	700498	0
[	Cr	52	50.060	ug/L	2.314	4	17778	620285	1
[	Cr	53	48.148	ug/L	2.038	4	210	67390	1
[	Mn	55	49.794	ug/L	1.291	2	314	824536	0
[	Co	59	48.896	ug/L	2.188	4	73	620443	2
[>	Ge	72		ug/L			426798	430337	2
[	Ni	60	50.592	ug/L	1.016	2	26	135669	1
[	Ni	62	51.298	ug/L	2.083	4	48	19620	2
[	Cu	63	52.276	ug/L	1.815	3	88	314756	1
[	Cu	65	51.776	ug/L	1.199	2	42	140046	0
[	Zn	66	50.777	ug/L	1.532	3	141	79933	0
[	Zn	67	50.427	ug/L	2.276	4	21	13396	4
[	Zn	68	49.844	ug/L	1.986	3	144	56807	2
[	As	75	50.549	ug/L	1.471	2	220	73772	1
[	As-1	75	50.988	ug/L	1.471	2	9153	83651	0
[	Se	82	78.668	ug/L	2.053	2	-1	12555	0
[	Se	78	79.902	ug/L	2.563	3	9315	42195	0
[	Mo	98	49.610	ug/L	1.562	3	35	188439	1
	Y	89		ug/L			271155	275646	0
	Kr	83		ug/L			529	583	3
[>	In	115		ug/L			840042	834912	0
[	Ag	107	51.441	ug/L	1.082	2	32	560341	1
[	Cd	111	49.654	ug/L	0.553	1	72	206580	1
[	Cd	114	49.377	ug/L	0.518	1	44	510376	1
[	Sb	121	49.211	ug/L	0.599	1	346	630579	0
[	Sb	123	48.980	ug/L	0.378	0	257	476612	0
[	Ba	135	50.077	ug/L	0.916	1	17	188036	1
[	Ba	137	50.168	ug/L	0.843	1	19	325859	1
[>	Tb	159		ug/L			1001666	1011851	0
[	Tl	205	49.611	ug/L	0.837	1	206	1572690	0
[	Pb	208	50.170	ug/L	0.451	0	157	2032668	0
[	Bi	209		ug/L			2293546	2203007	0
[	Th	232	49.919	ug/L	0.372	0	1512	1944213	0
[	U	238	52.546	ug/L	0.603	1	29	2195230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:29:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	684262	1
	Be	9	0.000	ug/L	0.002	1684	8	9	55
	C	13		ug/L			63994	62226	3
	Cl	37		ug/L			3532807	3528326	2
>	Sc	45		ug/L			674505	687249	1
	V	51	-0.005	ug/L	0.002	38	6013	6055	0
	V-1	51	-0.019	ug/L	0.001	5	387	139	9
	Cr	52	-0.022	ug/L	0.017	77	17778	17851	0
	Cr	53	-0.065	ug/L	0.016	24	210	125	16
	Mn	55	-0.001	ug/L	0.001	75	314	296	5
	Co	59	0.000	ug/L	0.000	161	73	76	5
>	Ge	72		ug/L			426798	425988	1
	Ni	60	-0.002	ug/L	0.003	129	26	20	32
	Ni	62	0.011	ug/L	0.031	285	48	52	22
	Cu	63	-0.000	ug/L	0.000	576	88	87	2
	Cu	65	-0.005	ug/L	0.002	50	42	29	20
	Zn	66	0.001	ug/L	0.002	149	141	143	2
	Zn	67	0.005	ug/L	0.003	58	21	22	2
	Zn	68	-0.019	ug/L	0.005	27	144	122	4
	As	75	0.034	ug/L	0.030	87	220	269	14
	As-1	75	0.066	ug/L	0.114	173	9153	9229	0
	Se	82	0.067	ug/L	0.096	142	-1	8	173
	Se	78	0.217	ug/L	0.404	185	9315	9384	0
	Mo	98	0.004	ug/L	0.003	84	35	49	21
	Y	89		ug/L			271155	270459	1
	Kr	83		ug/L			529	548	0
>	In	115		ug/L			840042	812126	0
	Ag	107	0.000	ug/L	0.001	11553	32	31	24
	Cd	111	0.001	ug/L	0.001	102	72	76	7
	Cd	114	0.000	ug/L	0.001	252	44	45	13
	Sb	121	0.019	ug/L	0.009	47	346	567	19
	Sb	123	0.019	ug/L	0.008	42	257	432	18
	Ba	135	-0.001	ug/L	0.002	189	17	13	42
	Ba	137	0.001	ug/L	0.001	151	19	23	32
>	Tb	159		ug/L			1001666	982567	0
	Tl	205	0.005	ug/L	0.005	112	206	346	47
	Pb	208	0.000	ug/L	0.000	193	157	159	4
	Bi	209		ug/L			2293546	2275284	0
	Th	232	0.066	ug/L	0.002	2	1512	3977	0
	U	238	0.001	ug/L	0.000	2	29	74	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:33:58
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683933	1
	Be	9	50.034	ug/L	0.841	1	8	120468	0
	C	13		ug/L			63994	66070	2
	Cl	37		ug/L			3532807	3775307	3
>	Sc	45		ug/L			674505	684426	1
	V	51	49.338	ug/L	1.329	2	6013	674609	1
	V-1	51	49.295	ug/L	1.561	3	387	673794	1
	Cr	52	49.891	ug/L	1.454	2	17778	602168	2
	Cr	53	49.736	ug/L	2.482	4	210	67784	4
	Mn	55	50.137	ug/L	1.332	2	314	808256	1
	Co	59	49.406	ug/L	0.759	1	73	610603	0
>	Ge	72		ug/L			426798	429799	2
	Ni	60	51.006	ug/L	0.994	1	26	136605	0
	Ni	62	50.622	ug/L	0.675	1	48	19349	3
	Cu	63	51.236	ug/L	1.610	3	88	308117	1
	Cu	65	51.013	ug/L	0.746	1	42	137848	2
	Zn	66	50.452	ug/L	1.096	2	141	79337	1
	Zn	67	50.153	ug/L	1.547	3	21	13305	1
	Zn	68	50.940	ug/L	1.570	3	144	58000	3
	As	75	50.901	ug/L	0.685	1	220	74206	0
	As-1	75	50.873	ug/L	0.866	1	9153	83393	0
	Se	82	50.956	ug/L	0.554	1	-1	8123	1
	Se	78	50.854	ug/L	1.354	2	9315	30234	0
	Mo	98	49.832	ug/L	1.144	2	35	189075	0
	Y	89		ug/L			271155	270557	1
	Kr	83		ug/L			529	565	2
>	In	115		ug/L			840042	822244	0
	Ag	107	48.502	ug/L	0.393	0	32	520362	0
	Cd	111	50.122	ug/L	0.655	1	72	205374	1
	Cd	114	50.866	ug/L	0.327	0	44	517780	0
	Sb	121	49.723	ug/L	0.297	0	346	627496	0
	Sb	123	50.142	ug/L	0.288	0	257	480514	0
	Ba	135	50.075	ug/L	0.722	1	17	185178	1
	Ba	137	49.887	ug/L	0.147	0	19	319117	0
>	Tb	159		ug/L			1001666	1007905	0
	Tl	205	48.340	ug/L	0.187	0	206	1526563	0
	Pb	208	49.413	ug/L	0.607	1	157	1994242	0
	Bi	209		ug/L			2293546	2190001	1
	Th	232	47.934	ug/L	0.611	1	1512	1859687	0
	U	238	48.673	ug/L	2.423	4	29	2025586	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:40:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	673285	2
[	Be	9	0.001	ug/L	0.001	185	8	10	26
	C	13		ug/L			63994	63733	4
	Cl	37		ug/L			3532807	3619561	1
[>	Sc	45		ug/L			674505	687411	1
[	V	51	-0.024	ug/L	0.008	31	6013	5800	1
[	V-1	51	-0.020	ug/L	0.000	2	387	127	5
[	Cr	52	-0.078	ug/L	0.022	27	17778	17196	0
[	Cr	53	-0.063	ug/L	0.007	10	210	128	7
[	Mn	55	-0.001	ug/L	0.001	65	314	300	4
[	Co	59	-0.000	ug/L	0.001	233	73	71	9
[>	Ge	72		ug/L			426798	421158	0
[	Ni	60	-0.002	ug/L	0.002	119	26	21	26
[	Ni	62	0.032	ug/L	0.027	83	48	59	16
[	Cu	63	-0.001	ug/L	0.002	172	88	81	11
[	Cu	65	-0.005	ug/L	0.003	59	42	29	24
[	Zn	66	-0.014	ug/L	0.002	12	141	119	2
[	Zn	67	-0.010	ug/L	0.013	128	21	18	19
[	Zn	68	-0.013	ug/L	0.007	54	144	128	5
[	As	75	0.012	ug/L	0.010	81	220	234	5
[	As-1	75	0.174	ug/L	0.094	54	9153	9280	1
[	Se	82	-0.053	ug/L	0.063	120	-1	-10	98
[	Se	78	0.598	ug/L	0.284	47	9315	9433	1
[	Mo	98	0.008	ug/L	0.002	21	35	66	9
	Y	89		ug/L			271155	270665	0
	Kr	83		ug/L			529	561	3
[>	In	115		ug/L			840042	820462	1
[	Ag	107	0.000	ug/L	0.000	675	32	32	15
[	Cd	111	0.001	ug/L	0.001	103	72	74	4
[	Cd	114	-0.000	ug/L	0.001	124	44	38	15
[	Sb	121	0.050	ug/L	0.007	13	346	964	9
[	Sb	123	0.051	ug/L	0.011	22	257	734	14
[	Ba	135	-0.002	ug/L	0.001	40	17	9	34
[	Ba	137	0.001	ug/L	0.001	154	19	22	23
[>	Tb	159		ug/L			1001666	981836	1
[	Tl	205	0.008	ug/L	0.006	78	206	456	42
[	Pb	208	0.000	ug/L	0.000	853	157	155	5
[	Bi	209		ug/L			2293546	2243714	0
[	Th	232	0.111	ug/L	0.011	9	1512	5693	8
[	U	238	0.002	ug/L	0.000	17	29	89	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:44:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	700365 ✓	1
[	Be	9	0.200	ug/L	0.008	3	8	501	3
	C	13		ug/L			63994	63447	4
	Cl	37		ug/L			3532807	3523565	1
[>	Sc	45		ug/L			674505	688392	0
[	V	51	0.194	ug/L	0.020	10	6013	8773	2
[	V-1	51	0.187	ug/L	0.009	4	387	2959	3
[	Cr	52	0.469	ug/L	0.021	4	17778	23665	0
[	Cr	53	0.439	ug/L	0.035	7	210	815	6
[	Mn	55	0.499	ug/L	0.014	2	314	8414	2
[	Co	59	0.200	ug/L	0.003	1	73	2555	1
[>	Ge	72		ug/L			426798	429033 ✓	1
[	Ni	60	0.510	ug/L	0.011	2	26	1390	1
[	Ni	62	0.453	ug/L	0.069	15	48	221	12
[	Cu	63	0.528	ug/L	0.015	2	88	3258	3
[	Cu	65	0.532	ug/L	0.009	1	42	1476	2
[	Zn	66	4.322	ug/L	0.068	1	141	6915	0
[	Zn	67	3.960	ug/L	0.228	5	21	1068	5
[	Zn	68	4.216	ug/L	0.158	3	144	4923	1
[	As	75	0.225	ug/L	0.017	7	220	548	5
[	As-1	75	0.250	ug/L	0.055	22	9153	9564	0
[	Se	82	0.495	ug/L	0.048	9	-1	76	10
[	Se	78	0.600	ug/L	0.252	41	9315	9608	0
[	Mo	98	0.191	ug/L	0.004	2	35	757	0
	Y	89		ug/L			271155	266536 ✓	0
	Kr	83		ug/L			529	542	2
[>	In	115		ug/L			840042	828114 ✓	1
[	Ag	107	0.203	ug/L	0.005	2	32	2226	3
[	Cd	111	0.099	ug/L	0.006	6	72	480	5
[	Cd	114	0.104	ug/L	0.002	1	44	1106	0
[	Sb	121	0.189	ug/L	0.004	1	346	2744	0
[	Sb	123	0.194	ug/L	0.001	0	257	2127	1
[	Ba	135	0.492	ug/L	0.006	1	17	1848	2
[	Ba	137	0.487	ug/L	0.005	1	19	3157	2
[>	Tb	159		ug/L			1001666	982131 ✓	1
[	Tl	205	0.205	ug/L	0.007	3	206	6503	2
[	Pb	208	0.110	ug/L	0.002	1	157	4473	0
[	Bi	209		ug/L			2293546	2274129	0
[	Th	232	0.192	ug/L	0.002	0	1512	8735	1
[	U	238	0.195	ug/L	0.000	0	29	7949	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICSA~~ 222222
Sample Dil Factor: 11.49.12 MJJ
Comments:
Sample Date/Time: Friday, November 16, 2012 15:48:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	709155 ✓	3
	Be	9	0.007	ug/L	0.002	38	8	25	25
	C	13		ug/L			63994	135711	1
	Cl	37		ug/L			3532807	10547836	1
>	Sc	45		ug/L			674505	851406	2
	V	51	0.142	ug/L	0.020	13	6013	9994	6
	V-1	51	1.444	ug/L	0.005	0	387	25034	2
	Cr	52	0.497	ug/L	0.032	6	17778	29679	1
	Cr	53	4.674	ug/L	0.093	1	210	8163	0
	Mn	55	0.064	ug/L	0.001	1	314	1683	2
	Co	59	0.025	ug/L	0.003	10	73	468	6
>	Ge	72		ug/L			426798	461713 ✓	1
	Ni	60	0.414	ug/L	0.010	2	26	1219	0
	Ni	62	4.588	ug/L	1.156	25	48	1934	25
	Cu	63	1.210	ug/L	0.101	8	88	7916	9
	Cu	65	0.430	ug/L	0.005	1	42	1292	1
	Zn	66	1.949	ug/L	0.016	0	141	3440	1
	Zn	67	7.846	ug/L	0.134	1	21	2255	0
	Zn	68	1.394	ug/L	0.064	4	144	1857	6
	As	75	0.063	ug/L	0.057	90	220	337	26
	As-1	75	0.467	ug/L	0.102	21	9153	10631	1
	Se	82	-0.333	ug/L	0.048	14	-1	-59	16
	Se	78	1.587	ug/L	0.552	34	9315	10775	1
	Mo	98	418.068	ug/L	8.534	2	35	1704184	2
	Y	89		ug/L			271155	295068	2
	Kr	83		ug/L			529	842	2
>	In	115		ug/L			840042	868906 ✓	2
	Ag	107	0.026	ug/L	0.002	7	32	330	8
	Cd	111	0.128	ug/L	0.010	7	72	630	7
	Cd	114	0.278	ug/L	0.011	3	44	3030	1
	Sb	121	0.074	ug/L	0.004	4	346	1344	5
	Sb	123	0.072	ug/L	0.002	2	257	999	1
	Ba	135	0.060	ug/L	0.004	7	17	251	5
	Ba	137	0.050	ug/L	0.004	7	19	359	8
>	Tb	159		ug/L			1001666	1055807 ✓	1
	Tl	205	0.042	ug/L	0.004	10	206	1614	9
	Pb	208	0.040	ug/L	0.001	3	157	1847	2
	Bi	209		ug/L			2293546	2177162	0
	Th	232	0.216	ug/L	0.103	47	1512	10361	39
	U	238	0.017	ug/L	0.001	4	29	778	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:55:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	651822	1
	Be	9	0.003	ug/L	0.002	48	8	15	20
	C	13		ug/L			63994	118709	0
	Cl	37		ug/L			3532807	9688038	3
>	Sc	45		ug/L			674505	684435	1
	V	51	0.098	ug/L	0.083	85	6013	7436	16
	V-1	51	1.418	ug/L	0.010	0	387	19773	1
	Cr	52	19.960	ug/L	0.107	0	17778	251769	1
	Cr	53	23.684	ug/L	0.311	1	210	32395	0
	Mn	55	19.365	ug/L	0.345	1	314	312395	0
	Co	59	18.880	ug/L	0.957	5	73	233300	3
>	Ge	72		ug/L			426798	405255	0
	Ni	60	20.012	ug/L	0.087	0	26	50564	0
	Ni	62	25.037	ug/L	1.339	5	48	9046	5
	Cu	63	20.880	ug/L	0.539	2	88	118492	2
	Cu	65	20.147	ug/L	0.121	0	42	51360	0
	Zn	66	19.841	ug/L	0.166	0	141	29507	0
	Zn	67	23.388	ug/L	0.399	1	21	5864	2
	Zn	68	18.588	ug/L	0.346	1	144	20044	1
	As	75	19.700	ug/L	0.319	1	220	27211	1
	As-1	75	20.002	ug/L	0.388	1	9153	36194	0
	Se	82	-0.434	ug/L	0.074	17	-1	-67	16
	Se	78	1.441	ug/L	0.255	17	9315	9402	0
	Mo	98	461.443	ug/L	2.033	0	35	1651065	0
	Y	89		ug/L			271155	268170	1
	Kr	83		ug/L			529	784	4
>	In	115		ug/L			840042	833177	1
	Ag	107	22.006	ug/L	0.580	2	32	239296	3
	Cd	111	19.695	ug/L	0.375	1	72	81799	0
	Cd	114	19.834	ug/L	0.482	2	44	204564	1
	Sb	121	0.049	ug/L	0.001	2	346	969	2
	Sb	123	0.053	ug/L	0.001	2	257	770	2
	Ba	135	0.052	ug/L	0.003	5	17	211	4
	Ba	137	0.039	ug/L	0.002	5	19	272	4
>	Tb	159		ug/L			1001666	1019512	0
	Tl	205	0.028	ug/L	0.001	4	206	1098	2
	Pb	208	0.037	ug/L	0.001	1	157	1674	1
	Bi	209		ug/L			2293546	2067717	3
	Th	232	0.039	ug/L	0.012	30	1512	3063	14
	U	238	-0.000	ug/L	0.000	251	29	26	34

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:02:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	643805	1
	Be	9	193.894	ug/L	4.482	2	8	439477	2
	C	13		ug/L			63994	64423	1
	Cl	37		ug/L			3532807	3718487	1
>	Sc	45		ug/L			674505	662247	1
	V	51	196.000	ug/L	1.534	0	6013	2575959	0
	V-1	51	193.120	ug/L	1.216	0	387	2553621	0
	Cr	52	194.948	ug/L	3.500	1	17778	2226056	0
	Cr	53	185.716	ug/L	2.916	1	210	244400	1
	Mn	55	190.415	ug/L	4.718	2	314	2969492	1
	Co	59	194.981	ug/L	3.209	1	73	2331691	1
>	Ge	72		ug/L			426798	388495	0
	Ni	60	198.627	ug/L	1.536	0	26	480895	0
	Ni	62	201.017	ug/L	2.367	1	48	69315	1
	Cu	63	198.612	ug/L	4.528	2	88	1079776	1
	Cu	65	201.635	ug/L	2.872	1	42	492433	1
	Zn	66	196.294	ug/L	3.256	1	141	278712	1
	Zn	67	196.592	ug/L	0.961	0	21	47106	1
	Zn	68	195.505	ug/L	3.953	2	144	200868	1
	As	75	204.100	ug/L	1.745	0	220	268392	0
	As-1	75	202.150	ug/L	1.334	0	9153	274813	0
	Se	82	202.844	ug/L	2.766	1	-1	29239	0
	Se	78	196.236	ug/L	3.291	1	9315	81240	1
	Mo	98	233.412	ug/L	4.275	1	35	800579	1
	Y	89		ug/L			271155	256233	1
	Kr	83		ug/L			529	733	3
>	In	115		ug/L			840042	799590	1
	Ag	107	224.823	ug/L	2.878	1	32	2345216	0
	Cd	111	198.829	ug/L	2.951	1	72	791957	1
	Cd	114	197.765	ug/L	2.156	1	44	1957303	0
	Sb	121	208.240	ug/L	5.536	2	346	2553825	1
	Sb	123	203.263	ug/L	3.448	1	257	1893203	1
	Ba	135	201.609	ug/L	3.063	1	17	724908	1
	Ba	137	204.341	ug/L	3.038	1	19	1270873	0
>	Tb	159		ug/L			1001666	987852	0
	Tl	205	198.892	ug/L	1.163	0	206	6155371	0
	Pb	208	197.398	ug/L	1.403	0	157	7807810	0
	Bi	209		ug/L			2293546	1922412	0
	Th	232	198.818	ug/L	0.973	0	1512	7555419	0
	U	238	196.618	ug/L	1.482	0	29	8019500	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:09:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	625649	1
	Be	9	292.016	ug/L	6.005	2	8	643146	1
	C	13		ug/L			63994	66112	0
	Cl	37		ug/L			3532807	3720039	0
>	Sc	45		ug/L			674505	631164	0
	V	51	306.509	ug/L	4.669	1	6013	3835950	0
	V-1	51	303.265	ug/L	5.141	1	387	3821385	0
	Cr	52	304.815	ug/L	2.717	0	17778	3308106	0
	Cr	53	294.426	ug/L	3.566	1	210	369158	0
	Mn	55	301.532	ug/L	4.866	1	314	4481781	0
	Co	59	302.091	ug/L	2.656	0	73	3442831	0
>	Ge	72		ug/L			426798	382426	0
	Ni	60	296.776	ug/L	1.325	0	26	707324	1
	Ni	62	304.019	ug/L	1.773	0	48	103168	0
	Cu	63	290.623	ug/L	5.679	1	88	1555269	1
	Cu	65	294.523	ug/L	1.468	0	42	707976	0
	Zn	66	282.879	ug/L	3.139	1	141	395309	0
	Zn	67	287.842	ug/L	0.602	0	21	67884	0
	Zn	68	278.979	ug/L	4.208	1	144	282121	2
	As	75	301.941	ug/L	4.616	1	220	390744	1
	As-1	75	302.646	ug/L	4.440	1	9153	400915	0
	Se	82	286.664	ug/L	3.783	1	-1	40678	1
	Se	78	289.679	ug/L	3.601	1	9315	114077	1
	Mo	98	328.562	ug/L	7.014	2	35	1109383	2
	Y	89		ug/L			271155	244846	1
	Kr	83		ug/L			529	796	3
>	In	115		ug/L			840042	776169	0
	Ag	107	308.042	ug/L	6.252	2	32	3119645	2
	Cd	111	290.846	ug/L	2.150	0	72	1124602	0
	Cd	114	305.321	ug/L	1.910	0	44	2933622	0
	Sb	121	306.155	ug/L	4.675	1	346	3645530	1
	Sb	123	306.094	ug/L	3.686	1	257	2767812	1
	Ba	135	305.088	ug/L	3.069	1	17	1064971	1
	Ba	137	309.899	ug/L	2.187	0	19	1871209	0
>	Tb	159		ug/L			1001666	962277	0
	Tl	205	296.494	ug/L	0.086	0	206	8938433	0
	Pb	208	298.811	ug/L	1.586	0	157	11513336	0
	Bi	209		ug/L			2293546	1836063	0
	Th	232	302.204	ug/L	4.714	1	1512	11185862	1
	U	238	295.238	ug/L	4.680	1	29	11729888	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:15:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	660964	2
	Be	9	0.007	ug/L	0.007	108	8	24	68
	C	13		ug/L			63994	62290	1
	Cl	37		ug/L			3532807	3575475	2
>	Sc	45		ug/L			674505	648232	1
	V	51	-0.002	ug/L	0.010	469	6013	5749	1
	V-1	51	0.004	ug/L	0.007	163	387	424	18
	Cr	52	-0.014	ug/L	0.021	149	17778	16928	0
	Cr	53	0.007	ug/L	0.031	468	210	210	17
	Mn	55	0.012	ug/L	0.004	31	314	487	10
	Co	59	0.003	ug/L	0.003	124	73	102	38
>	Ge	72		ug/L			426798	414211	2
	Ni	60	0.038	ug/L	0.003	7	26	123	5
	Ni	62	1.539	ug/L	0.447	29	48	610	24
	Cu	63	0.120	ug/L	0.041	34	88	779	28
	Cu	65	0.015	ug/L	0.006	39	42	78	18
	Zn	66	0.814	ug/L	0.008	0	141	1369	1
	Zn	67	0.686	ug/L	0.053	7	21	195	5
	Zn	68	0.758	ug/L	0.021	2	144	969	3
	As	75	0.016	ug/L	0.008	52	220	235	3
	As-1	75	0.130	ug/L	0.150	115	9153	9062	0
	Se	82	-0.080	ug/L	0.063	78	-1	-14	67
	Se	78	0.391	ug/L	0.532	136	9315	9192	0
	Mo	98	0.042	ug/L	0.007	17	35	187	14
	Y	89		ug/L			271155	266145	0
	Kr	83		ug/L			529	546	2
>	In	115		ug/L			840042	816768	0
	Ag	107	0.008	ug/L	0.004	46	32	117	34
	Cd	111	0.013	ug/L	0.017	127	72	125	55
	Cd	114	0.014	ug/L	0.021	154	44	184	117
	Sb	121	0.291	ug/L	0.013	4	346	3977	4
	Sb	123	0.295	ug/L	0.003	1	257	3061	1
	Ba	135	0.014	ug/L	0.015	105	17	67	79
	Ba	137	0.015	ug/L	0.013	87	19	116	73
>	Tb	159		ug/L			1001666	983468	0
	Tl	205	0.044	ug/L	0.012	26	206	1558	24
	Pb	208	0.013	ug/L	0.009	72	157	659	55
	Bi	209		ug/L			2293546	2240936	1
	Th	232	0.174	ug/L	0.021	12	1512	8052	9
	U	238	0.009	ug/L	0.006	67	29	373	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:21:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	679448	1
[	Be	9	0.006	ug/L	0.007	120	8	22	74
	C	13		ug/L			63994	63657	1
	Cl	37		ug/L			3532807	3565042	4
[>	Sc	45		ug/L			674505	659410	1
|	V	51	-0.009	ug/L	0.016	186	6013	5763	4
|	V-1	51	0.003	ug/L	0.017	603	387	417	54
|	Cr	52	-0.045	ug/L	0.039	85	17778	16862	1
|	Cr	53	-0.007	ug/L	0.010	142	210	196	8
|	Mn	55	0.017	ug/L	0.016	96	314	571	45
[	Co	59	0.008	ug/L	0.013	153	73	172	90
[>	Ge	72		ug/L			426798	413152	1
|	Ni	60	0.028	ug/L	0.019	69	26	96	52
|	Ni	62	0.260	ug/L	0.042	16	48	142	11
|	Cu	63	0.031	ug/L	0.012	38	88	266	26
|	Cu	65	0.011	ug/L	0.010	91	42	70	39
|	Zn	66	0.430	ug/L	0.031	7	141	786	6
|	Zn	67	0.407	ug/L	0.024	5	21	124	5
|	Zn	68	0.451	ug/L	0.027	5	144	631	3
|	As	75	0.013	ug/L	0.030	233	220	232	19
|	As-1	75	0.120	ug/L	0.088	72	9153	9028	1
|	Se	82	-0.007	ug/L	0.043	640	-1	-2	234
|	Se	78	0.404	ug/L	0.340	84	9315	9176	1
[	Mo	98	0.009	ug/L	0.003	30	35	69	14
	Y	89		ug/L			271155	257050	1
	Kr	83		ug/L			529	527	4
[>	In	115		ug/L			840042	825856	0
|	Ag	107	0.002	ug/L	0.001	51	32	51	19
|	Cd	111	0.006	ug/L	0.000	7	72	96	1
|	Cd	114	0.002	ug/L	0.002	108	44	61	30
|	Sb	121	0.066	ug/L	0.011	16	346	1175	11
|	Sb	123	0.067	ug/L	0.011	16	257	899	11
|	Ba	135	0.008	ug/L	0.002	20	17	47	13
[	Ba	137	0.009	ug/L	0.003	35	19	78	26
[>	Tb	159		ug/L			1001666	981711	1
|	Tl	205	0.021	ug/L	0.014	64	206	850	47
|	Pb	208	0.005	ug/L	0.001	9	157	366	6
|	Bi	209		ug/L			2293546	2260079	0
|	Th	232	0.030	ug/L	0.003	10	1512	2612	4
[	U	238	0.002	ug/L	0.001	47	29	95	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:27:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	648610	0
	Be	9	0.007	ug/L	0.002	32	8	25	22
	C	13		ug/L			63994	114971	1
	Cl	37		ug/L			3532807	9219316	0
>	Sc	45		ug/L			674505	665881	2
	V	51	0.105	ug/L	0.034	32	6013	7314	6
	V-1	51	1.430	ug/L	0.046	3	387	19385	1
	Cr	52	0.534	ug/L	0.023	4	17778	23636	1
	Cr	53	4.785	ug/L	0.109	2	210	6531	0
	Mn	55	0.066	ug/L	0.001	2	314	1341	0
	Co	59	0.024	ug/L	0.000	2	73	359	3
>	Ge	72		ug/L			426798	398034	1
	Ni	60	0.383	ug/L	0.031	7	26	974	8
	Ni	62	4.605	ug/L	0.837	18	48	1669	17
	Cu	63	1.155	ug/L	0.082	7	88	6513	5
	Cu	65	0.425	ug/L	0.015	3	42	1101	3
	Zn	66	1.677	ug/L	0.067	3	141	2569	2
	Zn	67	7.418	ug/L	0.113	1	21	1839	0
	Zn	68	1.069	ug/L	0.017	1	144	1258	3
	As	75	0.112	ug/L	0.057	50	220	356	22
	As-1	75	0.473	ug/L	0.020	4	9153	9174	1
	Se	82	-0.419	ug/L	0.080	19	-1	-63	17
	Se	78	1.478	ug/L	0.287	19	9315	9248	1
	Mo	98	449.119 ✓	ug/L	10.973	2	35	1578060	1
	Y	89		ug/L			271155	263434	0
	Kr	83		ug/L			529	786	5
>	In	115		ug/L			840042	822154	1
	Ag	107	0.030	ug/L	0.002	7	32	354	6
	Cd	111	0.113	ug/L	0.008	6	72	532	4
	Cd	114	0.272	ug/L	0.011	3	44	2813	2
	Sb	121	0.108	ug/L	0.008	7	346	1697	7
	Sb	123	0.108	ug/L	0.004	3	257	1285	3
	Ba	135	0.057	ug/L	0.003	4	17	226	3
	Ba	137	0.050	ug/L	0.002	3	19	337	4
>	Tb	159		ug/L			1001666	1001600	0
	Tl	205	0.047	ug/L	0.005	9	206	1687	8
	Pb	208	0.039	ug/L	0.001	2	157	1741	2
	Bi	209		ug/L			2293546	1966403	1
	Th	232	0.211	ug/L	0.111	52	1512	9656	44
	U	238	0.017	ug/L	0.000	1	29	723	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:32:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	635191	1
	Be	9	0.001	ug/L	0.002	175	8	10	39
	C	13		ug/L			63994	61914	4
	Cl	37		ug/L			3532807	3591312	4
>	Sc	45		ug/L			674505	640852	0
	V	51	-0.004	ug/L	0.005	106	6013	5657	1
	V-1	51	0.078	ug/L	0.017	21	387	1372	15
	Cr	52	-0.038	ug/L	0.011	27	17778	16471	1
	Cr	53	0.229	ug/L	0.055	23	210	491	14
	Mn	55	0.009	ug/L	0.000	3	314	439	1
	Co	59	-0.000	ug/L	0.001	435	73	66	17
>	Ge	72		ug/L			426798	393570	0
	Ni	60	0.049	ug/L	0.002	4	26	143	4
	Ni	62	0.245	ug/L	0.078	31	48	130	20
	Cu	63	0.033	ug/L	0.005	14	88	261	10
	Cu	65	0.014	ug/L	0.005	31	42	74	15
	Zn	66	0.943	ug/L	0.050	5	141	1485	4
	Zn	67	0.841	ug/L	0.009	1	21	223	0
	Zn	68	0.888	ug/L	0.042	4	144	1056	3
	As	75	0.038	ug/L	0.022	57	220	254	12
	As-1	75	0.183	ug/L	0.042	22	9153	8684	0
	Se	82	-0.029	ug/L	0.049	168	-1	-5	120
	Se	78	0.599	ug/L	0.213	35	9315	8815	0
	Mo	98	0.074	ug/L	0.012	16	35	291	14
	Y	89		ug/L			271155	258714	2
	Kr	83		ug/L			529	541	1
>	In	115		ug/L			840042	822509	0
	Ag	107	0.000	ug/L	0.000	197	32	34	14
	Cd	111	0.004	ug/L	0.003	61	72	88	12
	Cd	114	0.000	ug/L	0.001	825	44	45	23
	Sb	121	0.008	ug/L	0.006	80	346	436	17
	Sb	123	0.008	ug/L	0.004	46	257	329	10
	Ba	135	0.006	ug/L	0.002	35	17	40	20
	Ba	137	0.008	ug/L	0.001	7	19	68	5
>	Tb	159		ug/L			1001666	992149	2
	Tl	205	0.000	ug/L	0.000	168	206	213	5
	Pb	208	0.008	ug/L	0.001	9	157	467	4
	Bi	209		ug/L			2293546	2287878	0
	Th	232	-0.029	ug/L	0.001	3	1512	407	10
	U	238	-0.000	ug/L	0.000	87	29	22	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:37:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	657826 ✓	0
	Be	9	50.406	ug/L	1.336	2	8	116738	2
	C	13		ug/L			63994	62859	0
	Cl	37		ug/L			3532807	3670750	0
>	Sc	45		ug/L			674505	649136 ✓	1
	V	51	49.115	ug/L	0.079	0	6013	637090	1
	V-1	51	49.194	ug/L	0.317	0	387	637851	1
	Cr	52	48.659	ug/L	0.508	1	17778	557451	0
	Cr	53	48.923	ug/L	1.476	3	210	63235	1
	Mn	55	49.341	ug/L	1.593	3	314	754271	1
	Co	59	50.377	ug/L	1.722	3	73	590321	1
>	Ge	72		ug/L			426798	405628 ✓	0
	Ni	60	49.121	ug/L	0.511	1	26	124195	1
	Ni	62	51.130	ug/L	0.944	1	48	18442	1
	Cu	63	49.726	ug/L	0.664	1	88	282360	1
	Cu	65	51.431	ug/L	0.410	0	42	131164	0
	Zn	66	50.272	ug/L	0.766	1	141	74628	1
	Zn	67	50.444	ug/L	1.075	2	21	12634	2
	Zn	68	50.640	ug/L	1.295	2	144	54427	2
	As	75	50.678	ug/L	0.364	0	220	69740	0
	As-1	75	50.051	ug/L	0.308	0	9153	77589	0
	Se	82	52.605	ug/L	0.466	0	-1	7916	0
	Se	78	50.390	ug/L	0.456	0	9315	28361	0
	Mo	98	55.258	ug/L	0.522	0	35	197924	0
	Y	89		ug/L			271155	261496	1
	Kr	83		ug/L			529	549	4
>	In	115		ug/L			840042	822790 ✓	0
	Ag	107	55.340	ug/L	0.802	1	32	594147	1
	Cd	111	50.572	ug/L	0.608	1	72	207344	0
	Cd	114	50.658	ug/L	0.600	1	44	516035	1
	Sb	121	50.599	ug/L	0.546	1	346	638961	0
	Sb	123	50.378	ug/L	0.719	1	257	483083	1
	Ba	135	49.846	ug/L	0.139	0	17	184458	0
	Ba	137	49.733	ug/L	0.903	1	19	318365	2
>	Tb	159		ug/L			1001666	1005462 ✓	1
	Tl	205	48.466	ug/L	0.474	0	206	1526739	0
	Pb	208	49.781	ug/L	0.322	0	157	2004186	0
	Bi	209		ug/L			2293546	2225104	0
	Th	232	47.939	ug/L	0.887	1	1512	1855266	1
	U	238	48.978	ug/L	1.646	3	29	2033809	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:44:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	650878	3
	Be	9	0.004	ug/L	0.002	44	8	16	19
	C	13		ug/L			63994	63249	2
	Cl	37		ug/L			3532807	3537997	2
>	Sc	45		ug/L			674505	640016	1
	V	51	-0.015	ug/L	0.003	18	6013	5518	1
	V-1	51	0.007	ug/L	0.001	13	387	461	2
	Cr	52	-0.048	ug/L	0.030	62	17778	16346	1
	Cr	53	0.024	ug/L	0.022	91	210	230	11
	Mn	55	0.001	ug/L	0.001	214	314	307	5
	Co	59	0.000	ug/L	0.001	220	73	73	10
>	Ge	72		ug/L			426798	397130	1
	Ni	60	0.000	ug/L	0.001	1625	26	24	9
	Ni	62	0.089	ug/L	0.031	35	48	76	15
	Cu	63	0.003	ug/L	0.003	78	88	100	13
	Cu	65	-0.004	ug/L	0.004	82	42	28	32
	Zn	66	0.001	ug/L	0.007	698	141	133	8
	Zn	67	-0.008	ug/L	0.008	103	21	18	9
	Zn	68	-0.008	ug/L	0.003	35	144	125	3
	As	75	0.037	ug/L	0.014	37	220	255	7
	As-1	75	0.158	ug/L	0.007	4	9153	8729	1
	Se	82	-0.006	ug/L	0.055	847	-1	-2	299
	Se	78	0.491	ug/L	0.053	10	9315	8854	1
	Mo	98	0.013	ug/L	0.001	8	35	78	3
	Y	89		ug/L			271155	254925	0
	Kr	83		ug/L			529	525	3
>	In	115		ug/L			840042	806547	0
	Ag	107	0.001	ug/L	0.000	21	32	39	4
	Cd	111	0.003	ug/L	0.001	36	72	81	4
	Cd	114	0.000	ug/L	0.001	711	44	44	15
	Sb	121	0.049	ug/L	0.006	12	346	942	7
	Sb	123	0.053	ug/L	0.008	14	257	740	9
	Ba	135	-0.001	ug/L	0.001	99	17	14	16
	Ba	137	0.001	ug/L	0.001	67	19	25	18
>	Tb	159		ug/L			1001666	967690	2
	Tl	205	0.004	ug/L	0.004	91	206	335	38
	Pb	208	0.000	ug/L	0.000	54	157	171	7
	Bi	209		ug/L			2293546	2234478	1
	Th	232	0.071	ug/L	0.005	6	1512	4083	2
	U	238	0.001	ug/L	0.000	13	29	85	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:48:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	681027	0
[	Be	9	~0.004	ug/L	0.001	34	8	17	17
	C	13		ug/L			63994	67576	1
	Cl	37		ug/L			3532807	3593519	3
[>	Sc	45		ug/L			674505	660697	1
[	V	51	-0.003	ug/L	0.005	141	6013	5847	0
[	V-1	51	0.004	ug/L	0.001	24	387	426	1
[	Cr	52	-0.014	ug/L	0.012	86	17778	17252	0
[	Cr	53	0.008	ug/L	0.003	33	210	216	2
[	Mn	55	0.023	ug/L	0.000	0	314	665	1
[	Co	59	0.002	ug/L	0.001	39	73	93	8
[>	Ge	72		ug/L			426798	408504	1
[	Ni	60	0.009	ug/L	0.001	16	26	47	6
[	Ni	62	0.028	ug/L	0.013	48	48	56	7
[	Cu	63	0.063	ug/L	0.003	5	88	446	4
[	Cu	65	0.059	ug/L	0.003	4	42	192	2
[	Zn	66	0.489	ug/L	0.011	2	141	865	1
[	Zn	67	0.446	ug/L	0.026	5	21	132	5
[	Zn	68	0.507	ug/L	0.022	4	144	685	2
[	As	75	0.026	ug/L	0.013	48	220	246	6
[	As-1	75	0.097	ug/L	0.095	97	9153	8894	1
[	Se	82	0.000	ug/L	0.076	245321	-1	-1	706
[	Se	78	0.300	ug/L	0.322	107	9315	9032	1
[	Mo	98	0.005	ug/L	0.001	20	35	51	7
	Y	89		ug/L			271155	263082	1
	Kr	83		ug/L			529	528	6
[>	In	115		ug/L			840042	832193	2
[	Ag	107	0.001	ug/L	0.001	171	32	39	30
[	Cd	111	0.004	ug/L	0.002	46	72	88	6
[	Cd	114	0.001	ug/L	0.001	71	44	53	11
[	Sb	121	0.005	ug/L	0.004	92	346	403	12
[	Sb	123	0.004	ug/L	0.005	136	257	288	14
[	Ba	135	0.016	ug/L	0.002	14	17	75	8
[	Ba	137	0.019	ug/L	0.001	7	19	142	5
[>	Tb	159		ug/L			1001666	996605	1
[	Tl	205	0.002	ug/L	0.003	197	206	252	35
[	Pb	208	0.014	ug/L	0.001	3	157	704	1
[	Bi	209		ug/L			2293546	2290038	1
[	Th	232	0.057	ug/L	0.017	30	1512	3710	19
[	U	238	0.000	ug/L	0.000	510	29	30	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN

Be

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, November 16, 2012 16:52:51

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662078	1
	Be	9	25.397	ug/L	0.550	2	8	59195	1
	C	13		ug/L			63994	66946	0
	Cl	37		ug/L			3532807	3624604	1
>	Sc	45		ug/L			674505	668252	0
	V	51	24.976	ug/L	0.084	0	6013	336437	1
	V-1	51	24.812	ug/L	0.194	0	387	331420	1
	Cr	52	25.249	ug/L	0.753	2	17778	306242	1
	Cr	53	24.715	ug/L	0.139	0	210	33000	0
	Mn	55	25.082	ug/L	0.657	2	314	394958	1
	Co	59	25.490	ug/L	0.158	0	73	307657	1
>	Ge	72		ug/L			426798	403505	1
	Ni	60	26.564	ug/L	0.599	2	26	66810	1
	Ni	62	26.067	ug/L	0.841	3	48	9377	4
	Cu	63	27.045	ug/L	0.084	0	88	152804	1
	Cu	65	27.848	ug/L	0.073	0	42	70668	0
	Zn	66	85.013	ug/L	0.205	0	141	125449	1
	Zn	67	78.284	ug/L	1.272	1	21	19492	0
	Zn	68	82.754	ug/L	0.763	0	144	88395	2
	As	75	26.135	ug/L	0.322	1	220	35879	2
	As-1	75	25.647	ug/L	0.326	1	9153	43768	1
	Se	82	84.354	ug/L	0.586	0	-1	12628	1
	Se	78	81.935	ug/L	1.161	1	9315	40358	0
	Mo	98	26.596	ug/L	0.317	1	35	94779	0
	Y	89		ug/L			271155	261404	2
	Kr	83		ug/L			529	535	7
>	In	115		ug/L			840042	836348	1
	Ag	107	28.100	ug/L	0.455	1	32	306611	0
	Cd	111	25.212	ug/L	0.202	0	72	105108	1
	Cd	114	25.212	ug/L	0.209	0	44	261045	0
	Sb	121	24.825	ug/L	0.540	2	346	318774	1
	Sb	123	24.911	ug/L	0.343	1	257	242917	0
	Ba	135	25.526	ug/L	0.273	1	17	96019	1
	Ba	137	25.439	ug/L	0.308	1	19	165509	0
>	Tb	159		ug/L			1001666	1012343	0
	Tl	205	25.523	ug/L	0.049	0	206	809663	0
	Pb	208	26.079	ug/L	0.188	0	157	1057206	0
	Bi	209		ug/L			2293546	2291502	0
	Th	232	24.401	ug/L	0.360	1	1512	951598	0
	U	238	24.197	ug/L	0.128	0	29	1011465	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:56:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

BL

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	719001	1
[	Be	9	1.160	ug/L	0.039	3	8	2943	2
	C	13		ug/L			63994	86323	1
	Cl	37		ug/L			3532807	3564561	2
[>	Sc	45		ug/L			674505	777250	2
[	V	51	38.470	ug/L	1.646	4	6013	598500	1
[	V-1	51	38.480	ug/L	2.031	5	387	596934	2
[	Cr	52	32.065	ug/L	0.358	1	17778	446801	1
[	Cr	53	32.266	ug/L	1.670	5	210	49987	2
[	Mn	55	402.848	ug/L	9.693	2	314	7370606	0
[	Co	59	9.370	ug/L	0.523	5	73	131451	2
[>	Ge	72		ug/L			426798	414419	1
[	Ni	60	29.094	ug/L	0.166	0	26	75161	1
[	Ni	62	31.097	ug/L	0.737	2	48	11479	3
[	Cu	63	28.196	ug/L	0.261	0	88	163599	0
[	Cu	65	28.476	ug/L	0.498	1	42	74211	1
[	Zn	66	107.635	ug/L	1.512	1	141	163071	0
[	Zn	67	126.122	ug/L	1.674	1	21	32240	0
[	Zn	68	118.252	ug/L	1.413	1	144	129648	0
[	As	75	9.035	ug/L	0.026	0	220	12879	1
[	As-1	75	8.809	ug/L	0.071	0	9153	21273	0
[	Se	82	-0.905	ug/L	0.050	5	-1	-141	6
[	Se	78	-0.135	ug/L	0.166	122	9315	8991	0
[	Mo	98	0.380	ug/L	0.019	4	35	1424	3
	Y	89		ug/L			271155	492422	0
	Kr	83		ug/L			529	1244	3
[>	In	115		ug/L			840042	826716	1
[	Ag	107	0.315	ug/L	0.009	3	32	3430	1
[	Cd	111	0.713	ug/L	0.125	17	72	3003	15
[	Cd	114	0.346	ug/L	0.007	2	44	3585	1
[	Sb	121	0.034	ug/L	0.006	17	346	775	8
[	Sb	123	0.038	ug/L	0.005	12	257	621	6
[	Ba	135	387.808	ug/L	5.365	1	17	1441714	0
[	Ba	137	408.216	ug/L	6.194	1	19	2625099	0
[>	Tb	159		ug/L			1001666	1020055	0
[	Tl	205	0.134	ug/L	0.004	2	206	4482	2
[	Pb	208	25.521	ug/L	0.248	0	157	1042531	1
[	Bi	209		ug/L			2293546	2192860	0
[	Th	232	5.279	ug/L	0.055	1	1512	208646	1
[	U	238	2.068	ug/L	0.018	0	29	87116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:01:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			681751	724604	2
[	**Be**	**9**	**1.148**	ug/L	0.029	2	8	2936	3
	C	**13**		ug/L			63994	81902	0
	Cl	**37**		ug/L			3532807	3636535	0
[>	**Sc**	**45**		ug/L			674505	784571	1
[	**V**	**51**	**37.021**	ug/L	0.622	1	6013	582032	0
[	**V-1**	**51**	**36.875**	ug/L	0.558	1	387	577965	0
[	**Cr**	**52**	**26.037**	ug/L	0.960	3	17778	370050	1
[	**Cr**	**53**	**25.857**	ug/L	0.598	2	210	40515	0
[	**Mn**	**55**	**553.659**	ug/L	2.164	0	314	10229656	1
[	**Co**	**59**	**9.225**	ug/L	0.239	2	73	130737	1
[>	**Ge**	**72**		ug/L			426798	414791	0
[	**Ni**	**60**	**31.326**	ug/L	0.448	1	26	80995	0
[	**Ni**	**62**	**33.508**	ug/L	0.583	1	48	12374	1
[	**Cu**	**63**	**31.851**	ug/L	0.470	1	88	184980	1
[	**Cu**	**65**	**32.837**	ug/L	0.188	0	42	85650	0
[	**Zn**	**66**	**100.666**	ug/L	2.190	2	141	152666	1
[	**Zn**	**67**	**118.239**	ug/L	1.860	1	21	30256	1
[	**Zn**	**68**	**111.058**	ug/L	1.986	1	144	121897	2
[	**As**	**75**	**9.551**	ug/L	0.134	1	220	13613	0
[	**As-1**	**75**	**9.311**	ug/L	0.174	1	9153	21999	0
[	**Se**	**82**	**-0.624**	ug/L	0.083	13	-1	-97	13
[	**Se**	**78**	**-0.060**	ug/L	0.179	297	9315	9029	0
[	**Mo**	**98**	**0.382**	ug/L	0.014	3	35	1435	3
	Y	**89**		ug/L			271155	530125	0
	Kr	**83**		ug/L			529	1164	4
[>	**In**	**115**		ug/L			840042	830296	2
[	**Ag**	**107**	**0.430**	ug/L	0.016	3	32	4686	2
[	**Cd**	**111**	**0.760**	ug/L	0.034	4	72	3217	4
[	**Cd**	**114**	**0.363**	ug/L	0.011	3	44	3771	2
[	**Sb**	**121**	**0.016**	ug/L	0.005	28	346	547	9
[	**Sb**	**123**	**0.015**	ug/L	0.005	32	257	397	10
[	**Ba**	**135**	**354.733**	ug/L	9.097	2	17	1324142	0
[	**Ba**	**137**	**364.359**	ug/L	6.813	1	19	2352891	0
[>	**Tb**	**159**		ug/L			1001666	1025497	0
[	**Tl**	**205**	**0.148**	ug/L	0.001	0	206	4972	1
[	**Pb**	**208**	**20.049**	ug/L	0.183	0	157	823367	0
[	**Bi**	**209**		ug/L			2293546	2154270	0
[	**Th**	**232**	**5.438**	ug/L	0.055	1	1512	216027	0
[	**U**	**238**	**2.478**	ug/L	0.027	1	29	104949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:05:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	736751	0
[	Be	9	1.143	ug/L	0.028	2	8	2974	2
	C	13		ug/L			63994	83590	2
	Cl	37		ug/L			3532807	3690345	4
[>	Sc	45		ug/L			674505	808820	3
[	V	51	35.402	ug/L	1.755	4	6013	573523	1
[	V-1	51	35.179	ug/L	1.507	4	387	567930	0
[	Cr	52	26.766	ug/L	1.154	4	17778	391319	0
[	Cr	53	26.276	ug/L	0.757	2	210	42430	2
[	Mn	55	389.302	ug/L	21.927	5	314	7406021	2
[	Co	59	8.490	ug/L	0.286	3	73	123984	0
[>	Ge	72		ug/L			426798	415316	0
[	Ni	60	26.317	ug/L	0.236	0	26	68138	0
[	Ni	62	29.105	ug/L	0.757	2	48	10768	2
[	Cu	63	34.877	ug/L	0.562	1	88	202804	2
[	Cu	65	36.036	ug/L	0.471	1	42	94111	1
[	Zn	66	98.266	ug/L	1.350	1	141	149236	1
[	Zn	67	111.843	ug/L	0.594	0	21	28658	0
[	Zn	68	103.809	ug/L	0.865	0	144	114089	0
[	As	75	8.086	ug/L	0.088	1	220	11574	1
[	As-1	75	7.877	ug/L	0.078	0	9153	20007	0
[	Se	82	-0.609	ug/L	0.032	5	-1	-95	5
[	Se	78	0.132	ug/L	0.132	100	9315	9117	0
[	Mo	98	0.300	ug/L	0.012	4	35	1136	4
	Y	89		ug/L			271155	603270	1
	Kr	83		ug/L			529	1208	3
[>	In	115		ug/L			840042	818477	1
[	Ag	107	0.741	ug/L	0.011	1	32	7944	0
[	Cd	111	0.705	ug/L	0.038	5	72	2943	3
[	Cd	114	0.263	ug/L	0.005	1	44	2706	2
[	Sb	121	0.007	ug/L	0.001	15	346	422	2
[	Sb	123	0.010	ug/L	0.004	43	257	342	10
[	Ba	135	283.472	ug/L	6.380	2	17	1043301	1
[	Ba	137	285.217	ug/L	7.970	2	19	1815590	1
[>	Tb	159		ug/L			1001666	1036163	0
[	Tl	205	0.147	ug/L	0.001	0	206	4980	0
[	Pb	208	17.768	ug/L	0.167	0	157	737299	0
[	Bi	209		ug/L			2293546	2090871	4
[	Th	232	5.269	ug/L	0.067	1	1512	211539	1
[	U	238	2.828	ug/L	0.039	1	,29	121036	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:09:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	700421	1
	Be	9	0.846	ug/L	0.026	3	8	2095	2
	C	13		ug/L			63994	89314	2
	Cl	37		ug/L			3532807	3553860	1
>	Sc	45		ug/L			674505	752480	0
	V	51	30.951	ug/L	0.054	0	6013	467875	0
	V-1	51	30.864	ug/L	0.237	0	387	464099	1
	Cr	52	20.723	ug/L	0.389	1	17778	286614	1
	Cr	53	20.712	ug/L	0.285	1	210	31179	1
	Mn	55	837.648	ug/L	2.980	0	314	14843840	0
	Co	59	7.657	ug/L	0.107	1	73	104127	1
>	Ge	72		ug/L			426798	412325	1
	Ni	60	24.273	ug/L	0.372	1	26	62388	1
	Ni	62	25.239	ug/L	0.300	1	48	9276	0
	Cu	63	15.385	ug/L	0.193	1	88	88849	0
	Cu	65	15.885	ug/L	0.506	3	42	41194	1
	Zn	66	152.222	ug/L	0.679	0	141	229417	1
	Zn	67	165.866	ug/L	3.353	2	21	42174	0
	Zn	68	161.828	ug/L	4.372	2	144	176440	1
	As	75	9.871	ug/L	0.079	0	220	13978	1
	As-1	75	9.821	ug/L	0.198	2	9153	22580	0
	Se	82	-0.508	ug/L	0.081	15	-1	-79	17
	Se	78	0.193	ug/L	0.469	243	9315	9073	0
	Mo	98	0.397	ug/L	0.015	3	35	1480	1
	Y	89		ug/L			271155	348931	3
	Kr	83		ug/L			529	888	4
>	In	115		ug/L			840042	814873	0
	Ag	107	0.238	ug/L	0.011	4	32	2566	4
	Cd	111	1.281	ug/L	0.049	3	72	5269	3
	Cd	114	1.045	ug/L	0.012	1	44	10582	1
	Sb	121	0.038	ug/L	0.003	7	346	805	5
	Sb	123	0.038	ug/L	0.002	6	257	608	4
	Ba	135	485.039	ug/L	10.130	2	17	1777447	1
	Ba	137	505.252	ug/L	1.708	0	19	3202923	1
>	Tb	159		ug/L			1001666	991390	1
	Tl	205	0.125	ug/L	0.002	1	206	4092	1
	Pb	208	37.627	ug/L	0.577	1	157	1493627	1
	Bi	209		ug/L			2293546	2107174	4
	Th	232	4.088	ug/L	0.047	1	1512	157374	0
	U	238	0.596	ug/L	0.003	0	29	24428	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:13:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	716563	1
[	Be	9	0.784	ug/L	0.031	3	8	1987	3
	C	13		ug/L			63994	103357	3
	Cl	37		ug/L			3532807	3657254	1
[>	Sc	45		ug/L			674505	743893	1
[	V	51	32.403	ug/L	0.646	1	6013	483848	1
[	V-1	51	32.243	ug/L	0.452	1	387	479229	1
[	Cr	52	23.860	ug/L	0.751	3	17778	323207	2
[	Cr	53	23.571	ug/L	0.151	0	210	35045	1
[	Mn	55	1071.543	ug/L	22.639	2	314	18770515	2
[	Co	59	7.660	ug/L	0.159	2	73	102959	2
[>	Ge	72		ug/L			426798	424780	1
[	Ni	60	20.053	ug/L	0.788	3	26	53090	2
[	Ni	62	21.771	ug/L	0.287	1	48	8251	1
[	Cu	63	19.769	ug/L	0.432	2	88	117587	1
[	Cu	65	20.134	ug/L	0.047	0	42	53798	1
[	Zn	66	128.889	ug/L	0.215	0	141	200148	1
[	Zn	67	133.184	ug/L	1.420	1	21	34896	0
[	Zn	68	134.415	ug/L	0.739	0	144	151043	0
[	As	75	17.160	ug/L	0.274	1	220	24873	1
[	As-1	75	16.991	ug/L	0.299	1	9153	33598	1
[	Se	82	-0.130	ug/L	0.143	109	-1	-22	101
[	Se	78	-0.016	ug/L	0.315	1980	9315	9264	0
[	Mo	98	0.499	ug/L	0.010	1	35	1908	0
	Y	89		ug/L			271155	364431	1
	Kr	83		ug/L			529	790	6
[>	In	115		ug/L			840042	848740	1
[	Ag	107	0.109	ug/L	0.009	8	32	1239	6
[	Cd	111	1.714	ug/L	0.025	1	72	7317	0
[	Cd	114	1.613	ug/L	0.022	1	44	16994	0
[	Sb	121	0.093	ug/L	0.005	5	346	1555	2
[	Sb	123	0.092	ug/L	0.001	1	257	1171	2
[	Ba	135	272.461	ug/L	2.209	0	17	1039913	0
[	Ba	137	275.435	ug/L	5.409	1	19	1818346	1
[>	Tb	159		ug/L			1001666	1013774	1
[	Tl	205	0.145	ug/L	0.004	2	206	4801	2
[	Pb	208	71.785	ug/L	0.480	0	157	2913973	1
[	Bi	209		ug/L			2293546	2210852	2
[	Th	232	3.564	ug/L	0.013	0	1512	140492	1
[	U	238	0.733	ug/L	0.001	0	29	30721	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:17:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	707916	0
	Be	9	0.679	ug/L	0.018	2	8	1700	2
	C	13		ug/L			63994	91531	0
	Cl	37		ug/L			3532807	3715678	3
>	Sc	45		ug/L			674505	759493	2
	V	51	26.274	ug/L	0.338	1	6013	401839	1
	V-1	51	26.192	ug/L	0.422	1	387	397489	0
	Cr	52	20.703	ug/L	0.574	2	17778	288948	1
	Cr	53	20.583	ug/L	0.814	3	210	31260	2
	Mn	55	1550.240	ug/L	48.001	3	314	27721628	2
	Co	59	8.053	ug/L	0.252	3	73	110491	2
>	Ge	72		ug/L			426798	419774	0
	Ni	60	29.091	ug/L	1.208	4	26	76141	4
	Ni	62	31.009	ug/L	1.240	3	48	11595	4
	Cu	63	16.437	ug/L	0.242	1	88	96652	2
	Cu	65	16.833	ug/L	0.366	2	42	44459	2
	Zn	66	132.794	ug/L	2.558	1	141	203787	2
	Zn	67	136.357	ug/L	1.006	0	21	35310	1
	Zn	68	137.506	ug/L	2.163	1	144	152707	2
	As	75	21.115	ug/L	0.121	0	220	30198	0
	As-1	75	21.012	ug/L	0.079	0	9153	38933	0
	Se	82	-0.379	ug/L	0.117	30	-1	-60	30
	Se	78	0.201	ug/L	0.205	101	9315	9243	1
	Mo	98	0.435	ug/L	0.010	2	35	1646	1
	Y	89		ug/L			271155	337104	1
	Kr	83		ug/L			529	876	4
>	In	115		ug/L			840042	844861	1
	Ag	107	0.143	ug/L	0.002	1	32	1609	2
	Cd	111	1.620	ug/L	0.013	0	72	6891	1
	Cd	114	1.463	ug/L	0.042	2	44	15341	2
	Sb	121	0.106	ug/L	0.003	2	346	1723	3
	Sb	123	0.105	ug/L	0.012	11	257	1295	8
	Ba	135	259.359	ug/L	3.592	1	17	985399	1
	Ba	137	260.680	ug/L	6.338	2	19	1713063	1
>	Tb	159		ug/L			1001666	1000018	1
	Tl	205	0.177	ug/L	0.001	0	206	5736	2
	Pb	208	84.535	ug/L	0.599	0	157	3384856	1
	Bi	209		ug/L			2293546	2210273	1
	Th	232	3.850	ug/L	0.021	0	1512	149608	1
	U	238	0.496	ug/L	0.003	0	29	20517	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:22:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	703860	0
[	Be	9	0.681	ug/L	0.005	0	8	1695	0
	C	13		ug/L			63994	96598	0
	Cl	37		ug/L			3532807	3552616	0
[>	Sc	45		ug/L			674505	762937	2
[	V	51	25.187	ug/L	1.220	4	6013	386982	2
[	V-1	51	25.085	ug/L	1.238	4	387	382203	2
[	Cr	52	16.832	ug/L	0.431	2	17778	239745	1
[	Cr	53	16.725	ug/L	0.427	2	210	25563	0
[	Mn	55	926.230	ug/L	34.807	3	314	16631158	1
[	Co	59	6.191	ug/L	0.195	3	73	85321	0
[>	Ge	72		ug/L			426798	419352	1
[	Ni	60	19.378	ug/L	0.309	1	26	50659	1
[	Ni	62	20.963	ug/L	0.573	2	48	7843	1
[	Cu	63	15.238	ug/L	0.387	2	88	89491	1
[	Cu	65	15.637	ug/L	0.136	0	42	41253	1
[	Zn	66	147.729	ug/L	1.213	0	141	226439	1
[	Zn	67	147.844	ug/L	1.835	1	21	38239	0
[	Zn	68	151.463	ug/L	5.099	3	144	167952	1
[	As	75	12.463	ug/L	0.282	2	220	17890	0
[	As-1	75	12.437	ug/L	0.420	3	9153	26683	0
[	Se	82	-0.138	ug/L	0.187	135	-1	-23	125
[	Se	78	0.321	ug/L	0.565	176	9315	9278	0
[	Mo	98	0.549	ug/L	0.019	3	35	2068	2
	Y	89		ug/L			271155	350282	1
	Kr	83		ug/L			529	728	7
[>	In	115		ug/L			840042	850262	0
[	Ag	107	0.190	ug/L	0.007	3	32	2135	2
[	Cd	111	1.580	ug/L	0.017	1	72	6766	0
[	Cd	114	1.442	ug/L	0.032	2	44	15218	1
[	Sb	121	0.086	ug/L	0.002	2	346	1471	1
[	Sb	123	0.085	ug/L	0.002	2	257	1106	1
[	Ba	135	197.434	ug/L	2.916	1	17	754941	1
[	Ba	137	197.275	ug/L	1.656	0	19	1304863	0
[>	Tb	159		ug/L			1001666	1013813	1
[	Tl	205	0.142	ug/L	0.004	2	206	4727	2
[	Pb	208	62.224	ug/L	0.839	1	157	2525765	0
[	Bi	209		ug/L			2293546	2206898	0
[	Th	232	3.660	ug/L	0.039	1	1512	144241	0
[	U	238	1.343	ug/L	0.032	2	29	56251	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:26:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	693496	1
[	Be	9	0.640	ug/L	0.010	1	8	1571	0
	C	13		ug/L			63994	102486	1
	Cl	37		ug/L			3532807	3639665	2
[>	Sc	45		ug/L			674505	751325	3
[	V	51	21.332	ug/L	0.573	2	6013	323900	1
[	V-1	51	21.291	ug/L	0.640	3	387	319596	0
[	Cr	52	13.338	ug/L	0.460	3	17778	191161	1
[	Cr	53	13.414	ug/L	0.668	4	210	20224	2
[	Mn	55	1206.813	ug/L	62.140	5	314	21333427	2
[	Co	59	5.599	ug/L	0.294	5	73	75962	2
[>	Ge	72		ug/L			426798	434648	1
[	Ni	60	12.429	ug/L	0.387	3	26	33691	2
[	Ni	62	13.580	ug/L	0.218	1	48	5285	2
[	Cu	63	13.421	ug/L	0.129	0	88	81720	1
[	Cu	65	13.972	ug/L	0.045	0	42	38214	1
[	Zn	66	141.648	ug/L	5.155	3	141	225005	2
[	Zn	67	151.552	ug/L	3.689	2	21	40632	2
[	Zn	68	151.843	ug/L	7.046	4	144	174524	3
[	As	75	9.977	ug/L	0.085	0	220	14892	0
[	As-1	75	9.784	ug/L	0.170	1	9153	23749	0
[	Se	82	-0.022	ug/L	0.032	147	-1	-5	96
[	Se	78	-0.324	ug/L	0.389	119	9315	9351	0
[	Mo	98	0.259	ug/L	0.011	4	35	1031	4
	Y	89		ug/L			271155	357586	0
	Kr	83		ug/L			529	681	0
[>	In	115		ug/L			840042	845748	1
[	Ag	107	0.085	ug/L	0.005	5	32	969	6
[	Cd	111	1.924	ug/L	0.026	1	72	8176	0
[	Cd	114	1.824	ug/L	0.008	0	44	19144	0
[	Sb	121	0.159	ug/L	0.003	2	346	2415	2
[	Sb	123	0.155	ug/L	0.001	0	257	1788	1
[	Ba	135	378.155	ug/L	3.929	1	17	1438227	0
[	Ba	137	393.247	ug/L	3.692	0	19	2587146	0
[>	Tb	159		ug/L			1001666	1020200	0
[	Tl	205	0.148	ug/L	0.004	2	206	4951	1
[	Pb	208	75.614	ug/L	0.482	0	157	3088791	0
[	Bi	209		ug/L			2293546	2244736	0
[	Th	232	3.324	ug/L	0.015	0	1512	131969	0
[	U	238	0.726	ug/L	0.011	1	29	30599	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:31:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	681494 ✔	1
[	Be	9	50.478	ug/L	0.254	0	8	121123	1
	C	13		ug/L			63994	67045	1
	Cl	37		ug/L			3532807	3776792	1
[>	Sc	45		ug/L			674505	708035 ✔	0
[	V	51	47.413	ug/L	0.286	0	6013	671036	0
[	V-1	51	47.367	ug/L	0.481	1	387	669938	0
[	Cr	52	47.507	ug/L	0.727	1	17778	594188	2
[	Cr	53	47.355	ug/L	0.526	1	210	66792	0
[	Mn	55	47.753	ug/L	0.279	0	314	796580	1
[	Co	59	47.195	ug/L	1.375	2	73	603470	3
[>	Ge	72		ug/L			426798	418703 ✔	0
[	Ni	60	50.083	ug/L	0.352	0	26	130712	1
[	Ni	62	49.172	ug/L	0.666	1	48	18311	2
[	Cu	63	51.258	ug/L	1.704	3	88	300380	2
[	Cu	65	50.943	ug/L	0.075	0	42	134110	0
[	Zn	66	49.953	ug/L	0.540	1	141	76543	0
[	Zn	67	50.112	ug/L	1.717	3	21	12956	3
[	Zn	68	50.325	ug/L	1.512	3	144	55828	2
[	As	75	50.747	ug/L	0.631	1	220	72081	0
[	As-1	75	50.464	ug/L	0.690	1	9153	80672	0
[	Se	82	51.650	ug/L	0.146	0	-1	8023	0
[	Se	78	50.630	ug/L	0.458	0	9315	29371	0
[	Mo	98	52.332	ug/L	0.824	1	35	193482	1
	Y	89		ug/L			271155	268633	1
	Kr	83		ug/L			529	547	4
[>	In	115		ug/L			840042	819510 ✔	0
[	Ag	107	52.858	ug/L	0.923	1	32	565220	1
[	Cd	111	50.291	ug/L	0.330	0	72	205379	0
[	Cd	114	50.402	ug/L	0.169	0	44	511354	0
[	Sb	121	50.420	ug/L	0.100	0	346	634186	0
[	Sb	123	50.220	ug/L	0.180	0	257	479663	0
[	Ba	135	49.606	ug/L	0.538	1	17	182840	0
[	Ba	137	49.400	ug/L	0.471	0	19	314952	0
[>	Tb	159		ug/L			1001666	996761 ✔	0
[	Tl	205	48.390	ug/L	0.396	0	206	1511241	0
[	Pb	208	49.165	ug/L	0.377	0	157	1962289	0
[	Bi	209		ug/L			2293546	2188755	0
[	Th	232	47.439	ug/L	0.568	1	1512	1820219	1
[	U	238	47.871	ug/L	0.092	0	29	1970232	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:37:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	669220 ✓	1
[	Be	9	0.001	ug/L	0.002	125	8	12	36
	C	13		ug/L			63994	64513	1
	Cl	37		ug/L			3532807	3655930	4
[>	Sc	45		ug/L			674505	670359 ✓	3
|	V	51	-0.022	ug/L	0.011	51	6013	5686	3
|	V-1	51	-0.020	ug/L	0.000	1	387	114	6
|	Cr	52	-0.075	ug/L	0.035	46	17778	16797	2
|	Cr	53	-0.069	ug/L	0.008	10	210	116	6
|	Mn	55	0.003	ug/L	0.001	45	314	358	2
[	Co	59	-0.000	ug/L	0.001	509	73	71	6
[>	Ge	72		ug/L			426798	415373 ✓	1
|	Ni	60	-0.001	ug/L	0.001	114	26	23	8
|	Ni	62	0.011	ug/L	0.008	74	48	51	6
|	Cu	63	-0.000	ug/L	0.001	335	88	84	6
|	Cu	65	-0.004	ug/L	0.003	92	42	31	26
|	Zn	66	-0.005	ug/L	0.010	200	141	130	12
|	Zn	67	0.014	ug/L	0.023	164	21	24	23
|	Zn	68	-0.010	ug/L	0.005	52	144	129	5
|	As	75	0.017	ug/L	0.020	119	220	237	10
|	As-1	75	0.129	ug/L	0.102	78	9153	9089	0
|	Se	82	-0.044	ug/L	0.030	67	-1	-8	53
|	Se	78	0.412	ug/L	0.342	83	9315	9228	0
[	Mo	98	0.003	ug/L	0.001	28	35	45	5
	Y	89		ug/L			271155	259185	1
	Kr	83		ug/L			529	543	2
[>	In	115		ug/L			840042	821372 ✓	0
|	Ag	107	-0.000	ug/L	0.000	70	32	28	10
|	Cd	111	0.001	ug/L	0.001	133	72	74	5
|	Cd	114	-0.001	ug/L	0.001	177	44	38	23
|	Sb	121	0.033	ug/L	0.006	17	346	758	8
|	Sb	123	0.037	ug/L	0.005	12	257	607	6
|	Ba	135	-0.000	ug/L	0.001	290	17	15	29
[	Ba	137	0.001	ug/L	0.000	54	19	22	9
[>	Tb	159		ug/L			1001666	962148 ✓	0
|	Tl	205	0.005	ug/L	0.005	97	206	343	41
|	Pb	208	0.001	ug/L	0.000	16	157	194	3
|	Bi	209		ug/L			2293546	2222751	0
|	Th	232	0.054	ug/L	0.004	6	1512	3435	4
[	U	238	0.001	ug/L	0.000	3	29	60	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 17:43:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	687193	1
	Be	9	0.168	ug/L	0.008	4	8	414	3
	C	13		ug/L			63994	70880	2
	Cl	37		ug/L			3532807	3544444	1
>	Sc	45		ug/L			674505	717250	2
	V	51	5.507	ug/L	0.162	2	6013	84569	1
	V-1	51	5.476	ug/L	0.198	3	387	78772	1
	Cr	52	6.338	ug/L	0.301	4	17778	96656	3
	Cr	53	6.216	ug/L	0.352	5	210	9068	3
	Mn	55	237.587	ug/L	7.866	3	314	4010869	0
	Co	59	1.788	ug/L	0.086	4	73	23211	1
>	Ge	72		ug/L			426798	426580	0
	Ni	60	6.489	ug/L	0.229	3	26	17277	4
	Ni	62	6.712	ug/L	0.131	1	48	2587	0
	Cu	63	3.596	ug/L	0.034	0	88	21555	1
	Cu	65	3.811	ug/L	0.110	2	42	10259	3
	Zn	66	43.598	ug/L	0.731	1	141	68078	1
	Zn	67	45.714	ug/L	0.885	1	21	12045	2
	Zn	68	45.831	ug/L	0.318	0	144	51817	1
	As	75	3.359	ug/L	0.036	1	220	5066	1
	As-1	75	3.273	ug/L	0.016	0	9153	13886	1
	Se	82	-0.033	ug/L	0.089	265	-1	-7	195
	Se	78	-0.201	ug/L	0.134	66	9315	9229	1
	Mo	98	0.108	ug/L	0.006	5	35	442	5
	Y	89		ug/L			271155	298881	1
	Kr	83		ug/L			529	578	4
>	In	115		ug/L			840042	842039	0
	Ag	107	0.043	ug/L	0.003	7	32	509	7
	Cd	111	0.467	ug/L	0.014	3	72	2029	2
	Cd	114	0.432	ug/L	0.011	2	44	4544	2
	Sb	121	0.009	ug/L	0.003	30	346	459	8
	Sb	123	0.009	ug/L	0.003	28	257	349	8
	Ba	135	79.416	ug/L	1.180	1	17	300727	0
	Ba	137	79.385	ug/L	1.115	1	19	519993	0
>	Tb	159		ug/L			1001666	999246	0
	Tl	205	0.038	ug/L	0.003	7	206	1382	6
	Pb	208	12.334	ug/L	0.064	0	157	493622	0
	Bi	209		ug/L			2293546	2297978	0
	Th	232	1.097	ug/L	0.014	1	1512	43685	1
	U	238	0.135	ug/L	0.003	2	29	5602	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:47:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	693854	0
	Be	9	0.826	ug/L	0.016	1	8	2027	1
	C	13		ug/L			63994	86528	2
	Cl	37		ug/L			3532807	3635492	0
>	Sc	45		ug/L			674505	774098	1
	V	51	24.870	ug/L	0.527	2	6013	388042	0
	V-1	51	24.775	ug/L	0.466	1	387	383275	0
	Cr	52	28.401	ug/L	0.420	1	17778	396511	0
	Cr	53	28.004	ug/L	0.318	1	210	43281	0
	Mn	55	1071.980	ug/L	30.317	2	314	19537978	1
	Co	59	8.144	ug/L	0.057	0	73	113920	0
>	Ge	72		ug/L			426798	414641	2
	Ni	60	31.796	ug/L	0.366	1	26	82192	3
	Ni	62	33.677	ug/L	0.241	0	48	12434	2
	Cu	63	17.698	ug/L	0.064	0	88	102775	2
	Cu	65	18.245	ug/L	0.354	1	42	47577	0
	Zn	66	213.308	ug/L	6.657	3	141	323136	2
	Zn	67	215.090	ug/L	7.057	3	21	54992	3
	Zn	68	220.438	ug/L	5.108	2	144	241630	0
	As	75	16.619	ug/L	0.476	2	220	23512	0
	As-1	75	16.588	ug/L	0.623	3	9153	32217	0
	Se	82	-0.279	ug/L	0.089	32	-1	-44	28
	Se	78	0.589	ug/L	0.515	87	9315	9280	0
	Mo	98	0.589	ug/L	0.013	2	35	2192	1
	Y	89		ug/L			271155	382213	0
	Kr	83		ug/L			529	908	1
>	In	115		ug/L			840042	818109	1
	Ag	107	0.218	ug/L	0.011	5	32	2361	4
	Cd	111	2.285	ug/L	0.022	0	72	9382	1
	Cd	114	2.075	ug/L	0.026	1	44	21059	0
	Sb	121	0.059	ug/L	0.004	7	346	1081	3
	Sb	123	0.060	ug/L	0.006	9	257	821	6
	Ba	135	410.338	ug/L	7.294	1	17	1509548	0
	Ba	137	425.096	ug/L	12.310	2	19	2704924	1
>	Tb	159		ug/L			1001666	1015216	0
	Tl	205	0.179	ug/L	0.001	0	206	5917	0
	Pb	208	59.035	ug/L	0.411	0	157	2399917	1
	Bi	209		ug/L			2293546	2168252	0
	Th	232	5.233	ug/L	0.073	1	1512	205855	1
	U	238	0.650	ug/L	0.012	1	29	27289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:51:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	696466	1
[	Be	9	0.851	ug/L	0.004	0	8	2095	0
	C	13		ug/L			63994	89380	2
	Cl	37		ug/L			3532807	3710422	4
[>	Sc	45		ug/L			674505	773543	0
|	V	51	28.646	ug/L	0.385	1	6013	445644	0
|	V-1	51	28.691	ug/L	0.508	1	387	443490	1
|	Cr	52	28.597	ug/L	0.150	0	17778	398847	0
|	Cr	53	28.740	ug/L	0.477	1	210	44380	1
|	Mn	55	1002.278	ug/L	24.879	2	314	18256924	2
[	Co	59	8.286	ug/L	0.131	1	73	115817	1
[>	Ge	72		ug/L			426798	413110	2
|	Ni	60	32.753	ug/L	0.835	2	26	84311	0
|	Ni	62	34.803	ug/L	1.054	3	48	12793	0
|	Cu	63	17.806	ug/L	0.336	1	88	102998	1
|	Cu	65	18.622	ug/L	0.465	2	42	48375	0
|	Zn	66	207.890	ug/L	3.232	1	141	313798	0
|	Zn	67	213.433	ug/L	4.050	1	21	54376	2
|	Zn	68	213.661	ug/L	9.000	4	144	233271	2
|	As	75	15.927	ug/L	0.354	2	220	22461	1
|	As-1	75	15.885	ug/L	0.480	3	9153	31117	1
|	Se	82	-0.326	ug/L	0.082	25	-1	-51	26
|	Se	78	0.459	ug/L	0.584	127	9315	9194	0
[	Mo	98	0.645	ug/L	0.010	1	35	2388	2
	Y	89		ug/L			271155	386689	0
	Kr	83		ug/L			529	885	2
[>	In	115		ug/L			840042	825771	1
|	Ag	107	0.209	ug/L	0.009	4	32	2284	4
|	Cd	111	2.067	ug/L	0.042	2	72	8576	2
|	Cd	114	1.887	ug/L	0.026	1	44	19330	1
|	Sb	121	0.047	ug/L	0.005	10	346	934	7
|	Sb	123	0.046	ug/L	0.005	10	257	694	5
|	Ba	135	380.281	ug/L	6.198	1	17	1412093	0
[	Ba	137	399.744	ug/L	4.943	1	19	2567712	0
[>	Tb	159		ug/L			1001666	1006257	1
|	Tl	205	0.175	ug/L	0.005	2	206	5719	2
|	Pb	208	54.177	ug/L	0.422	0	157	2182863	0
|	Bi	209		ug/L			2293546	2164915	0
|	Th	232	5.547	ug/L	0.075	1	1512	216201	0
[	U	238	0.640	ug/L	0.020	3	29	26607	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:55:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	680581	1
[	Be	9	26.375	ug/L	0.875	3	8	63180	1
	C	13		ug/L			63994	82584	2
	Cl	37		ug/L			3532807	3706048	3
[>	Sc	45		ug/L			674505	775277	1
[	V	51	55.472	ug/L	2.033	3	6013	858255	2
[	V-1	51	54.941	ug/L	1.972	3	387	850572	2
[	Cr	52	55.749	ug/L	1.283	2	17778	759809	1
[	Cr	53	54.033	ug/L	1.125	2	210	83401	1
[	Mn	55	1045.642	ug/L	29.330	2	314	19086214	1
[	Co	59	32.850	ug/L	0.857	2	73	459821	0
[>	Ge	72		ug/L			426798	415192	1
[	Ni	60	60.690	ug/L	2.149	3	26	157008	2
[	Ni	62	61.729	ug/L	0.728	1	48	22779	1
[	Cu	63	45.538	ug/L	0.580	1	88	264648	0
[	Cu	65	45.530	ug/L	1.274	2	42	118830	1
[	Zn	66	287.740	ug/L	2.874	0	141	436535	0
[	Zn	67	287.092	ug/L	16.511	5	21	73470	4
[	Zn	68	291.942	ug/L	3.280	1	144	320472	0
[	As	75	42.258	ug/L	0.287	0	220	59557	0
[	As-1	75	41.856	ug/L	0.516	1	9153	67866	0
[	Se	82	79.745	ug/L	1.510	1	-1	12282	1
[	Se	78	78.562	ug/L	2.250	2	9315	40186	0
[	Mo	98	24.644	ug/L	0.862	3	35	90345	2
	Y	89		ug/L			271155	398412	2
	Kr	83		ug/L			529	897	5
[>	In	115		ug/L			840042	828567	0
[	Ag	107	25.421	ug/L	0.057	0	32	274847	0
[	Cd	111	26.939	ug/L	0.875	3	72	111244	2
[	Cd	114	26.775	ug/L	0.573	2	44	274647	1
[	Sb	121	1.282	ug/L	0.029	2	346	16633	1
[	Sb	123	1.262	ug/L	0.034	2	257	12429	2
[	Ba	135	415.609	ug/L	6.093	1	17	1548600	1
[	Ba	137	430.426	ug/L	10.663	2	19	2774184	2
[>	Tb	159		ug/L			1001666	995251	1
[	Tl	205	25.279	ug/L	0.680	2	206	788150	0
[	Pb	208	82.892	ug/L	1.954	2	157	3302556	0
[	Bi	209		ug/L			2293546	2161201	0
[	Th	232	31.602	ug/L	0.472	1	1512	1211013	0
[	U	238	25.556	ug/L	0.868	3	29	1049846	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:59:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	702019	0
	Be	9	0.507	ug/L	0.014	2	8	1262	2
	C	13		ug/L			63994	96699	2
	Cl	37		ug/L			3532807	3730940	1
>	Sc	45		ug/L			674505	770961	0
	V	51	26.494	ug/L	0.562	2	6013	411267	1
	V-1	51	26.331	ug/L	0.579	2	387	405664	1
	Cr	52	16.313	ug/L	0.123	0	17778	235496	0
	Cr	53	16.058	ug/L	0.132	0	210	24819	0
	Mn	55	1292.245	ug/L	2.744	0	314	23462329	1
	Co	59	6.522	ug/L	0.042	0	73	90875	0
>	Ge	72		ug/L			426798	428537	1
	Ni	60	13.547	ug/L	0.216	1	26	36200	0
	Ni	62	14.987	ug/L	0.147	0	48	5744	0
	Cu	63	16.907	ug/L	0.253	1	88	101471	0
	Cu	65	17.333	ug/L	0.278	1	42	46723	0
	Zn	66	270.878	ug/L	6.186	2	141	424130	1
	Zn	67	257.991	ug/L	4.688	1	21	68181	2
	Zn	68	268.809	ug/L	7.175	2	144	304530	1
	As	75	18.363	ug/L	0.380	2	220	26835	1
	As-1	75	18.155	ug/L	0.433	2	9153	35586	0
	Se	82	-0.080	ug/L	0.059	73	-1	-14	65
	Se	78	-0.222	ug/L	0.444	199	9315	9261	0
	Mo	98	0.477	ug/L	0.019	3	35	1841	3
	Y	89		ug/L			271155	354333	0
	Kr	83		ug/L			529	730	0
>	In	115		ug/L			840042	856157	0
	Ag	107	0.139	ug/L	0.003	1	32	1582	1
	Cd	111	5.438	ug/L	0.071	1	72	23268	1
	Cd	114	5.230	ug/L	0.044	0	44	55471	1
	Sb	121	0.330	ug/L	0.006	1	346	4686	1
	Sb	123	0.326	ug/L	0.003	0	257	3510	1
	Ba	135	336.767	ug/L	2.499	0	17	1296659	0
	Ba	137	352.231	ug/L	2.215	0	19	2346031	0
>	Tb	159		ug/L			1001666	1014171	0
	Tl	205	0.316	ug/L	0.006	1	206	10260	1
	Pb	208	252.059	ug/L	0.815	0	157	10235558	0
	Bi	209		ug/L			2293546	2213987	0
	Th	232	5.356	ug/L	0.046	0	1512	210435	0
	U	238	0.504	ug/L	0.007	1	29	21115	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:03:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	699804	1
[	Be	9	0.682	ug/L	0.006	0	8	1690	1
	C	13		ug/L			63994	92616	1
	Cl	37		ug/L			3532807	3636508	4
[>	Sc	45		ug/L			674505	764826	1
[	V	51	23.347	ug/L	0.458	1	6013	360336	1
[	V-1	51	23.223	ug/L	0.409	1	387	354992	1
[	Cr	52	20.417	ug/L	0.614	3	17778	287232	1
[	Cr	53	20.096	ug/L	0.428	2	210	30748	0
[	Mn	55	731.786	ug/L	3.099	0	314	13180330	1
[	Co	59	6.188	ug/L	0.166	2	73	85528	1
[>	Ge	72		ug/L			426798	419639	2
[	Ni	60	20.521	ug/L	1.092	5	26	53654	3
[	Ni	62	22.422	ug/L	0.898	4	48	8389	2
[	Cu	63	18.903	ug/L	0.696	3	88	111039	1
[	Cu	65	18.932	ug/L	0.528	2	42	49962	1
[	Zn	66	87.481	ug/L	0.452	0	141	134242	1
[	Zn	67	100.849	ug/L	4.617	4	21	26095	2
[	Zn	68	95.448	ug/L	2.852	2	144	105968	1
[	As	75	7.045	ug/L	0.108	1	220	10214	0
[	As-1	75	6.974	ug/L	0.299	4	9153	18924	0
[	Se	82	-0.217	ug/L	0.179	82	-1	-35	76
[	Se	78	0.254	ug/L	0.622	244	9315	9257	0
[	Mo	98	0.422	ug/L	0.013	3	35	1599	0
	Y	89		ug/L			271155	401084	1
	Kr	83		ug/L			529	844	2
[>	In	115		ug/L			840042	833821	0
[	Ag	107	0.165	ug/L	0.002	0	32	1824	1
[	Cd	111	0.748	ug/L	0.029	3	72	3177	4
[	Cd	114	0.582	ug/L	0.013	2	44	6049	1
[	Sb	121	0.031	ug/L	0.001	3	346	733	2
[	Sb	123	0.031	ug/L	0.004	11	257	553	6
[	Ba	135	309.282	ug/L	4.913	1	17	1159821	1
[	Ba	137	330.660	ug/L	3.618	1	19	2144803	0
[>	Tb	159		ug/L			1001666	1006288	1
[	Tl	205	0.131	ug/L	0.005	3	206	4347	1
[	Pb	208	31.927	ug/L	0.386	1	157	1286391	0
[	Bi	209		ug/L			2293546	2208778	0
[	Th	232	5.350	ug/L	0.125	2	1512	208547	1
[	U	238	1.099	ug/L	0.028	2	29	45670	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:09:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	683053	1
[	Be	9	0.475	ug/L	0.022	4	8	1151	3
	C	13		ug/L			63994	91355	4
	Cl	37		ug/L			3532807	3543080	1
[>	Sc	45		ug/L			674505	768193	0
[	V	51	17.593	ug/L	0.255	1	6013	274444	1
[	V-1	51	17.490	ug/L	0.178	1	387	268676	0
[	Cr	52	11.830	ug/L	0.151	1	17778	175725	0
[	Cr	53	11.652	ug/L	0.108	0	210	18012	1
[	Mn	55	1085.447	ug/L	30.994	2	314	19634743	2
[	Co	59	4.449	ug/L	0.007	0	73	61796	0
[>	Ge	72		ug/L			426798	426741	0
[	Ni	60	13.750	ug/L	0.465	3	26	36589	3
[	Ni	62	14.977	ug/L	0.167	1	48	5717	0
[	Cu	63	10.315	ug/L	0.242	2	88	61692	2
[	Cu	65	10.801	ug/L	0.129	1	42	29013	1
[	Zn	66	153.889	ug/L	1.972	1	141	240035	0
[	Zn	67	164.315	ug/L	1.465	0	21	43250	0
[	Zn	68	163.951	ug/L	0.952	0	144	185055	0
[	As	75	6.360	ug/L	0.100	1	220	9400	1
[	As-1	75	6.321	ug/L	0.138	2	9153	18304	0
[	Se	82	-0.247	ug/L	0.067	26	-1	-41	25
[	Se	78	0.141	ug/L	0.378	267	9315	9371	0
[	Mo	98	0.363	ug/L	0.005	1	35	1405	1
	Y	89		ug/L			271155	344364	0
	Kr	83		ug/L			529	761	0
[>	In	115		ug/L			840042	836141	1
[	Ag	107	0.152	ug/L	0.002	1	32	1691	0
[	Cd	111	1.584	ug/L	0.053	3	72	6667	2
[	Cd	114	1.405	ug/L	0.015	1	44	14588	0
[	Sb	121	0.041	ug/L	0.004	8	346	869	4
[	Sb	123	0.042	ug/L	0.005	12	257	667	6
[	Ba	135	421.825	ug/L	10.568	2	17	1585933	1
[	Ba	137	437.199	ug/L	10.947	2	19	2843466	1
[>	Tb	159		ug/L			1001666	1004811	0
[	Tl	205	0.137	ug/L	0.000	0	206	4509	0
[	Pb	208	66.063	ug/L	0.037	0	157	2658019	0
[	Bi	209		ug/L			2293546	2229660	0
[	Th	232	3.598	ug/L	0.038	1	1512	140580	1
[	U	238	0.425	ug/L	0.003	0	29	17673	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 18:13:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be 11.19.12 MJ

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			681751	689491	2
[	**Be**	**9**	**~0.192**	ug/L	0.018	9	8	475	7
	C	**13**		ug/L			63994	71114	3
	Cl	**37**		ug/L			3532807	3716722	1
[>	**Sc**	**45**		ug/L			674505	771845 ✓	1
[	**V**	**51**	**7.326**	ug/L	0.138	1	6013	118836	0
[	**V-1**	**51**	**7.311**	ug/L	0.140	1	387	113083	0
[	**Cr**	**52**	**12.900**	ug/L	0.316	2	17778	190669	1
[	**Cr**	**53**	**12.704**	ug/L	0.261	2	210	19705	0
[	**Mn**	**55**	**281.131**	ug/L	9.092	3	314	5108906	1
[	**Co**	**59**	**2.239**	ug/L	0.039	1	73	31283	0
[>	**Ge**	**72**		ug/L			426798	433626	2
[	**Ni**	**60**	**12.323**	ug/L	0.414	3	26	33323	3
[	**Ni**	**62**	**12.738**	ug/L	0.481	3	48	4946	2
[	**Cu**	**63**	**4.863**	ug/L	0.118	2	88	29597	2
[	**Cu**	**65**	**4.819**	ug/L	0.118	2	42	13173	0
[	**Zn**	**66**	**60.166**	ug/L	0.862	1	141	95434	0
[	**Zn**	**67**	**60.297**	ug/L	2.643	4	21	16131	2
[	**Zn**	**68**	**62.739**	ug/L	2.178	3	144	72015	1
[	**As**	**75**	**3.309**	ug/L	0.079	2	220	5076	0
[	**As-1**	**75**	**3.238**	ug/L	0.171	5	9153	14060	0
[	**Se**	**82**	**-0.062**	ug/L	0.035	56	-1	-11	47
[	**Se**	**78**	**-0.157**	ug/L	0.345	219	9315	9397	0
[	**Mo**	**98**	**0.113**	ug/L	0.003	2	35	469	3
	Y	**89**		ug/L			271155	303515	2
	Kr	**83**		ug/L			529	600	2
[>	**In**	**115**		ug/L			840042	848102	0
[	**Ag**	**107**	**0.041**	ug/L	0.001	2	32	482	2
[	**Cd**	**111**	**0.870**	ug/L	0.019	2	72	3747	2
[	**Cd**	**114**	**0.829**	ug/L	0.015	1	44	8752	1
[	**Sb**	**121**	**-0.009**	ug/L	0.002	19	346	235	9
[	**Sb**	**123**	**-0.006**	ug/L	0.003	44	257	202	12
[	**Ba**	**135**	**90.548**	ug/L	0.713	0	17	345368	0
[	**Ba**	**137**	**90.748**	ug/L	0.235	0	19	598744	0
[>	**Tb**	**159**		ug/L			1001666	1009506	0
[	**Tl**	**205**	**0.044**	ug/L	0.003	6	206	1615	4
[	**Pb**	**208**	**37.424**	ug/L	0.565	1	157	1512739	0
[	**Bi**	**209**		ug/L			2293546	2314325	1
[	**Th**	**232**	**1.119**	ug/L	0.009	0	1512	44989	1
[	**U**	**238**	**0.107**	ug/L	0.002	1	29	4492	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:17:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	690479	0
	Be	**9**	**0.496**	ug/L	0.017	3	8	1213	3
	C	**13**		ug/L			63994	94476	4
	Cl	**37**		ug/L			3532807	3715063	3
>	**Sc**	**45**		ug/L			674505	773058	1
	V	**51**	**18.987**	ug/L	0.578	3	6013	297445	1
	V-1	**51**	**18.871**	ug/L	0.626	3	387	291598	1
	Cr	**52**	**12.527**	ug/L	0.190	1	17778	186032	0
	Cr	**53**	**12.324**	ug/L	0.350	2	210	19151	1
	Mn	**55**	**1031.025**	ug/L	15.004	1	314	18772998	2
	Co	**59**	**4.705**	ug/L	0.111	2	73	65755	1
>	**Ge**	**72**		ug/L			426798	423249	1
	Ni	**60**	**12.035**	ug/L	0.277	2	26	31762	0
	Ni	**62**	**13.159**	ug/L	0.240	1	48	4987	2
	Cu	**63**	**10.944**	ug/L	0.426	3	88	64896	3
	Cu	**65**	**11.275**	ug/L	0.232	2	42	30028	0
	Zn	**66**	**134.560**	ug/L	3.056	2	141	208144	0
	Zn	**67**	**142.372**	ug/L	6.919	4	21	37150	3
	Zn	**68**	**142.217**	ug/L	3.697	2	144	159185	0
	As	**75**	**13.991**	ug/L	0.279	1	220	20244	1
	As-1	**75**	**13.940**	ug/L	0.380	2	9153	29091	0
	Se	**82**	**-0.131**	ug/L	0.038	28	-1	-22	27
	Se	**78**	**0.241**	ug/L	0.396	164	9315	9333	0
	Mo	**98**	**0.502**	ug/L	0.005	1	35	1911	1
	Y	**89**		ug/L			271155	356922	1
	Kr	**83**		ug/L			529	726	3
>	**In**	**115**		ug/L			840042	844972	0
	Ag	**107**	**0.109**	ug/L	0.009	7	32	1237	8
	Cd	**111**	**1.755**	ug/L	0.043	2	72	7459	2
	Cd	**114**	**1.612**	ug/L	0.019	1	44	16907	0
	Sb	**121**	**0.087**	ug/L	0.009	10	346	1469	8
	Sb	**123**	**0.079**	ug/L	0.002	2	257	1037	2
	Ba	**135**	**289.768**	ug/L	4.591	1	17	1101190	2
	Ba	**137**	**293.057**	ug/L	4.424	1	19	1926441	1
>	**Tb**	**159**		ug/L			1001666	1007825	1
	Tl	**205**	**0.145**	ug/L	0.002	1	206	4771	2
	Pb	**208**	**76.275**	ug/L	0.670	0	157	3078201	1
	Bi	**209**		ug/L			2293546	2216310	1
	Th	**232**	**4.835**	ug/L	0.054	1	1512	188936	1
	U	**238**	**0.592**	ug/L	0.007	1	29	24681	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:21:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	692772	3
[	Be	9	0.520	ug/L	0.032	6	8	1276	2
	C	13		ug/L			63994	88271	0
	Cl	37		ug/L			3532807	3731395	3
[>	Sc	45		ug/L			674505	785280	0
[	V	51	21.708	ug/L	0.166	0	6013	344533	0
[	V-1	51	21.718	ug/L	0.256	1	387	340922	0
[	Cr	52	15.145	ug/L	0.137	0	17778	224182	1
[	Cr	53	15.349	ug/L	0.409	2	210	24177	2
[	Mn	55	679.278	ug/L	9.300	1	314	12561412	0
[	Co	59	4.876	ug/L	0.045	0	73	69233	1
[>	Ge	72		ug/L			426798	430643	1
[	Ni	60	14.125	ug/L	0.336	2	26	37928	1
[	Ni	62	15.190	ug/L	0.460	3	48	5850	2
[	Cu	63	11.112	ug/L	0.190	1	88	67046	0
[	Cu	65	11.472	ug/L	0.236	2	42	31089	0
[	Zn	66	87.832	ug/L	0.509	0	141	138316	0
[	Zn	67	93.822	ug/L	0.621	0	21	24930	0
[	Zn	68	91.647	ug/L	2.414	2	144	104436	1
[	As	75	7.522	ug/L	0.097	1	220	11179	1
[	As-1	75	7.441	ug/L	0.134	1	9153	20107	0
[	Se	82	-0.180	ug/L	0.070	38	-1	-30	37
[	Se	78	0.081	ug/L	0.333	408	9315	9432	0
[	Mo	98	0.425	ug/L	0.007	1	35	1652	2
	Y	89		ug/L			271155	372721	2
	Kr	83		ug/L			529	775	2
[>	In	115		ug/L			840042	841096	0
[	Ag	107	0.092	ug/L	0.001	1	32	1043	1
[	Cd	111	0.735	ug/L	0.032	4	72	3151	4
[	Cd	114	0.591	ug/L	0.005	0	44	6200	0
[	Sb	121	0.030	ug/L	0.002	6	346	727	3
[	Sb	123	0.034	ug/L	0.012	34	257	591	19
[	Ba	135	209.450	ug/L	0.504	0	17	792283	0
[	Ba	137	209.497	ug/L	1.599	0	19	1370812	1
[>	Tb	159		ug/L			1001666	1017447	0
[	Tl	205	0.125	ug/L	0.001	0	206	4195	0
[	Pb	208	50.987	ug/L	0.673	1	157	2077098	0
[	Bi	209		ug/L			2293546	2231017	0
[	Th	232	4.816	ug/L	0.050	1	1512	189976	0
[	U	238	0.719	ug/L	0.007	1	29	30245	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:25:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	663575	0
	Be	9	52.743	ug/L	0.935	1	8	123229	2
	C	13		ug/L			63994	69176	3
	Cl	37		ug/L			3532807	3843309	1
>	Sc	45		ug/L			674505	724492	0
	V	51	48.591	ug/L	1.223	2	6013	703551	2
	V-1	51	48.465	ug/L	0.928	1	387	701432	2
	Cr	52	47.789	ug/L	1.221	2	17778	611474	2
	Cr	53	47.405	ug/L	0.816	1	210	68419	1
	Mn	55	47.252	ug/L	0.723	1	314	806533	1
	Co	59	47.132	ug/L	0.912	1	73	616655	1
>	Ge	72		ug/L			426798	429076	0
	Ni	60	50.553	ug/L	1.753	3	26	135205	3
	Ni	62	49.714	ug/L	0.175	0	48	18969	0
	Cu	63	49.403	ug/L	1.012	2	88	296716	1
	Cu	65	50.065	ug/L	0.243	0	42	135062	0
	Zn	66	49.452	ug/L	0.136	0	141	77659	0
	Zn	67	49.757	ug/L	1.086	2	21	13182	1
	Zn	68	49.166	ug/L	0.503	1	144	55899	0
	As	75	50.486	ug/L	0.470	0	220	73491	0
	As-1	75	50.123	ug/L	0.419	0	9153	82177	0
	Se	82	51.083	ug/L	0.909	1	-1	8131	1
	Se	78	49.804	ug/L	0.726	1	9315	29760	0
	Mo	98	53.593	ug/L	0.499	0	35	203060	0
	Y	89		ug/L			271155	279740	2
	Kr	83		ug/L			529	572	0
>	In	115		ug/L			840042	823632	1
	Ag	107	54.286	ug/L	0.584	1	32	583362	1
	Cd	111	51.115	ug/L	0.304	0	72	209803	1
	Cd	114	50.350	ug/L	0.864	1	44	513328	0
	Sb	121	50.242	ug/L	1.201	2	346	634982	1
	Sb	123	50.390	ug/L	1.026	2	257	483622	0
	Ba	135	49.254	ug/L	0.571	1	17	182436	0
	Ba	137	48.955	ug/L	1.069	2	19	313631	1
>	Tb	159		ug/L			1001666	987854	0
	Tl	205	48.779	ug/L	0.798	1	206	1509723	1
	Pb	208	49.981	ug/L	0.269	0	157	1977039	0
	Bi	209		ug/L			2293546	2227711	0
	Th	232	48.909	ug/L	0.466	0	1512	1859729	0
	U	238	48.745	ug/L	0.174	0	29	1988258	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:32:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	664340 ✓	1
	Be	9	0.001	ug/L	0.001	105	8	11	30
	C	13		ug/L			63994	66827	2
	Cl	37		ug/L			3532807	3677611	5
>	Sc	45		ug/L			674505	686998 ✓	3
	V	51	-0.010	ug/L	0.011	109	6013	5989	1
	V-1	51	-0.022	ug/L	0.001	5	387	88	20
	Cr	52	-0.031	ug/L	0.036	113	17778	17730	1
	Cr	53	-0.071	ug/L	0.003	4	210	116	1
	Mn	55	0.007	ug/L	0.006	90	314	432	23
	Co	59	0.001	ug/L	0.002	248	73	85	30
>	Ge	72		ug/L			426798	413705 ✓	1
	Ni	60	-0.001	ug/L	0.001	91	26	21	16
	Ni	62	-0.004	ug/L	0.002	57	48	45	2
	Cu	63	0.002	ug/L	0.003	164	88	96	20
	Cu	65	-0.006	ug/L	0.001	11	42	24	6
	Zn	66	-0.003	ug/L	0.006	208	141	133	7
	Zn	67	0.015	ug/L	0.023	149	21	24	25
	Zn	68	-0.003	ug/L	0.019	550	144	135	14
	As	75	0.026	ug/L	0.020	78	220	249	9
	As-1	75	0.161	ug/L	0.101	62	9153	9097	0
	Se	82	0.020	ug/L	0.054	270	-1	1	617
	Se	78	0.558	ug/L	0.306	54	9315	9249	0
	Mo	98	0.003	ug/L	0.002	48	35	47	11
	Y	89		ug/L			271155	264161	1
	Kr	83		ug/L			529	542	5
>	In	115		ug/L			840042	811997 ✓	0
	Ag	107	0.002	ug/L	0.002	128	32	48	45
	Cd	111	0.003	ug/L	0.002	65	72	83	11
	Cd	114	0.000	ug/L	0.001	107	44	48	11
	Sb	121	0.035	ug/L	0.004	12	346	767	7
	Sb	123	0.034	ug/L	0.002	7	257	568	4
	Ba	135	0.001	ug/L	0.002	351	17	19	46
	Ba	137	0.002	ug/L	0.002	104	19	31	43
>	Tb	159		ug/L			1001666	953627 ✓	0
	Tl	205	0.007	ug/L	0.005	78	206	391	39
	Pb	208	0.002	ug/L	0.001	39	157	230	13
	Bi	209		ug/L			2293546	2258962	0
	Th	232	0.057	ug/L	0.004	6	1512	3520	3
	U	238	0.001	ug/L	0.001	61	29	70	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:38:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	686839	0
[	Be	9	0.003	ug/L	0.002	59	8	16	27
	C	13		ug/L			63994	72976	2
	Cl	37		ug/L			3532807	3652211	2
[>	Sc	45		ug/L			674505	703583	1
[	V	51	-0.001	ug/L	0.008	1236	6013	6262	0
[	V-1	51	-0.022	ug/L	0.001	2	387	89	8
[	Cr	52	0.005	ug/L	0.035	714	17778	18599	1
[	Cr	53	-0.065	ug/L	0.011	16	210	127	10
[	Mn	55	0.034	ug/L	0.003	7	314	888	3
[	Co	59	0.001	ug/L	0.001	42	73	92	8
[>	Ge	72		ug/L			426798	419923	0
[	Ni	60	0.015	ug/L	0.003	20	26	64	11
[	Ni	62	-0.010	ug/L	0.030	317	48	44	25
[	Cu	63	0.014	ug/L	0.003	23	88	169	11
[	Cu	65	0.012	ug/L	0.001	4	42	72	2
[	Zn	66	0.162	ug/L	0.007	4	141	388	3
[	Zn	67	0.151	ug/L	0.017	11	21	60	7
[	Zn	68	0.172	ug/L	0.017	9	144	332	5
[	As	75	-0.012	ug/L	0.009	76	220	199	6
[	As-1	75	0.160	ug/L	0.064	40	9153	9233	0
[	Se	82	-0.104	ug/L	0.054	51	-1	-17	46
[	Se	78	0.574	ug/L	0.211	36	9315	9395	0
[	Mo	98	-0.003	ug/L	0.001	39	35	24	18
	Y	89		ug/L			271155	265513	1
	Kr	83		ug/L			529	554	3
[>	In	115		ug/L			840042	821741	0
[	Ag	107	-0.000	ug/L	0.000	176	32	29	17
[	Cd	111	0.001	ug/L	0.002	171	72	77	13
[	Cd	114	-0.001	ug/L	0.000	26	44	36	5
[	Sb	121	-0.005	ug/L	0.003	64	346	269	15
[	Sb	123	-0.006	ug/L	0.002	40	257	195	11
[	Ba	135	0.016	ug/L	0.003	21	17	74	15
[	Ba	137	0.017	ug/L	0.003	18	19	124	15
[>	Tb	159		ug/L			1001666	969433	1
[	Tl	205	0.002	ug/L	0.003	110	206	272	28
[	Pb	208	0.015	ug/L	0.000	2	157	723	2
[	Bi	209		ug/L			2293546	2258791	0
[	Th	232	0.031	ug/L	0.009	30	1512	2628	13
[	U	238	-0.000	ug/L	0.000	314	29	25	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:42:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	692347	1
	Be	9	25.189	ug/L	0.569	2	8	61401	2
	C	13		ug/L			63994	69895	0
	Cl	37		ug/L			3532807	3738417	1
>	Sc	45		ug/L			674505	727870	0
	V	51	24.826	ug/L	0.585	2	6013	364300	2
	V-1	51	24.470	ug/L	0.467	1	387	355996	1
	Cr	52	25.226	ug/L	0.083	0	17778	333326	0
	Cr	53	24.068	ug/L	0.298	1	210	35010	1
	Mn	55	24.495	ug/L	0.246	1	314	420205	0
	Co	59	24.270	ug/L	0.360	1	73	319068	1
>	Ge	72		ug/L			426798	419155	0
	Ni	60	26.653	ug/L	0.169	0	26	69648	1
	Ni	62	27.259	ug/L	0.413	1	48	10181	0
	Cu	63	27.174	ug/L	0.445	1	88	159496	2
	Cu	65	27.729	ug/L	0.318	1	42	73096	1
	Zn	66	85.743	ug/L	0.639	0	141	131435	1
	Zn	67	76.008	ug/L	1.108	1	21	19661	0
	Zn	68	83.383	ug/L	1.852	2	144	92511	2
	As	75	26.066	ug/L	0.677	2	220	37175	3
	As-1	75	25.996	ug/L	0.249	0	9153	45965	1
	Se	82	83.279	ug/L	0.800	0	-1	12951	1
	Se	78	82.373	ug/L	1.305	1	9315	42102	1
	Mo	98	26.737	ug/L	0.153	0	35	98979	0
	Y	89		ug/L			271155	273890	1
	Kr	83		ug/L			529	566	5
>	In	115		ug/L			840042	833854	1
	Ag	107	28.336	ug/L	0.561	1	32	308301	1
	Cd	111	25.239	ug/L	0.346	1	72	104902	0
	Cd	114	24.893	ug/L	0.206	0	44	256986	0
	Sb	121	24.724	ug/L	0.326	1	346	316572	0
	Sb	123	24.823	ug/L	0.412	1	257	241339	0
	Ba	135	25.164	ug/L	0.424	1	17	94373	0
	Ba	137	24.992	ug/L	0.625	2	19	162110	1
>	Tb	159		ug/L			1001666	997189	0
	Tl	205	25.275	ug/L	0.300	1	206	789782	0
	Pb	208	26.095	ug/L	0.258	0	157	1042066	0
	Bi	209		ug/L			2293546	2294817	0
	Th	232	24.269	ug/L	0.152	0	1512	932294	0
	U	238	24.384	ug/L	0.170	0	29	1004012	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:46:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	705675	0
	Be	9	0.462	ug/L	0.004	0	8	1156	0
	C	13		ug/L			63994	93906	4
	Cl	37		ug/L			3532807	3746268	3
>	Sc	45		ug/L			674505	788247	0
	V	51	18.492	ug/L	0.617	3	6013	295636	3
	V-1	51	18.400	ug/L	0.536	2	387	289990	2
	Cr	52	12.479	ug/L	0.397	3	17778	189064	2
	Cr	53	12.340	ug/L	0.209	1	210	19558	1
	Mn	55	779.087	ug/L	22.091	2	314	14461718	2
	Co	59	4.281	ug/L	0.205	4	73	61014	4
>	Ge	72		ug/L			426798	423985	0
	Ni	60	11.919	ug/L	0.478	4	26	31517	3
	Ni	62	13.376	ug/L	0.675	5	48	5078	5
	Cu	63	9.736	ug/L	0.220	2	88	57858	2
	Cu	65	10.234	ug/L	0.044	0	42	27315	0
	Zn	66	60.295	ug/L	1.274	2	141	93528	1
	Zn	67	71.615	ug/L	1.144	1	21	18740	1
	Zn	68	67.089	ug/L	2.205	3	144	75326	3
	As	75	4.669	ug/L	0.062	1	220	6915	1
	As-1	75	4.742	ug/L	0.076	1	9153	15915	0
	Se	82	-0.042	ug/L	0.045	107	-1	-8	84
	Se	78	0.625	ug/L	0.094	14	9315	9507	0
	Mo	98	0.426	ug/L	0.006	1	35	1630	1
	Y	89		ug/L			271155	358473	1
	Kr	83		ug/L			529	708	1
>	In	115		ug/L			840042	833331	0
	Ag	107	0.100	ug/L	0.003	3	32	1125	3
	Cd	111	0.512	ug/L	0.018	3	72	2195	3
	Cd	114	0.396	ug/L	0.005	1	44	4131	1
	Sb	121	0.046	ug/L	0.004	7	346	926	5
	Sb	123	0.051	ug/L	0.006	12	257	747	8
	Ba	135	223.936	ug/L	0.180	0	17	839254	0
	Ba	137	226.700	ug/L	2.723	1	19	1469721	1
>	Tb	159		ug/L			1001666	1014310	0
	Tl	205	0.099	ug/L	0.002	1	206	3347	2
	Pb	208	20.900	ug/L	0.121	0	157	849002	1
	Bi	209		ug/L			2293546	2209126	0
	Th	232	4.509	ug/L	0.075	1	1512	177424	0
	U	238	0.687	ug/L	0.007	1	29	28794	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:50:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	689090	1
	Be	9	0.510	ug/L	0.032	6	8	1246	5
	C	13		ug/L			63994	88326	4
	Cl	37		ug/L			3532807	3647048	2
>	Sc	45		ug/L			674505	785565	2
	V	51	19.695	ug/L	0.191	0	6013	313316	1
	V-1	51	19.721	ug/L	0.266	1	387	309687	0
	Cr	52	12.965	ug/L	0.403	3	17778	194898	1
	Cr	53	13.228	ug/L	0.619	4	210	20863	2
	Mn	55	273.182	ug/L	14.494	5	314	5050392	3
	Co	59	4.563	ug/L	0.142	3	73	64781	1
>	Ge	72		ug/L			426798	429181	1
	Ni	60	12.483	ug/L	0.320	2	26	33406	1
	Ni	62	13.288	ug/L	0.169	1	48	5107	2
	Cu	63	11.833	ug/L	0.364	3	88	71136	1
	Cu	65	11.946	ug/L	0.357	2	42	32257	1
	Zn	66	50.870	ug/L	1.960	3	141	79873	2
	Zn	67	57.002	ug/L	1.246	2	21	15100	0
	Zn	68	53.822	ug/L	0.310	0	144	61192	0
	As	75	3.223	ug/L	0.044	1	220	4900	0
	As-1	75	3.210	ug/L	0.121	3	9153	13877	0
	Se	82	-0.135	ug/L	0.057	42	-1	-23	37
	Se	78	0.361	ug/L	0.240	66	9315	9514	0
	Mo	98	0.284	ug/L	0.020	7	35	1111	5
	Y	89		ug/L			271155	376051	2
	Kr	83		ug/L			529	793	1
>	In	115		ug/L			840042	838716	0
	Ag	107	0.133	ug/L	0.003	2	32	1487	1
	Cd	111	0.367	ug/L	0.043	11	72	1603	10
	Cd	114	0.191	ug/L	0.002	1	44	2027	0
	Sb	121	0.013	ug/L	0.003	22	346	517	6
	Sb	123	0.012	ug/L	0.003	24	257	374	7
	Ba	135	136.512	ug/L	3.336	2	17	514866	1
	Ba	137	135.903	ug/L	2.705	1	19	886658	1
>	Tb	159		ug/L			1001666	1004734	1
	Tl	205	0.084	ug/L	0.003	3	206	2841	2
	Pb	208	8.613	ug/L	0.179	2	157	346600	1
	Bi	209		ug/L			2293546	2240636	0
	Th	232	4.567	ug/L	0.089	1	1512	177985	0
	U	238	0.808	ug/L	0.009	1	29	33554	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:55:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	722458	2
	Be	9	0.425	ug/L	0.018	4	8	1088	1
	C	13		ug/L			63994	84637	2
	Cl	37		ug/L			3532807	3796240	2
>	Sc	45		ug/L			674505	835463	3
	V	51	21.546	ug/L	0.137	0	6013	363869	3
	V-1	51	21.426	ug/L	0.155	0	387	357856	3
	Cr	52	13.749	ug/L	0.241	1	17778	218474	2
	Cr	53	13.567	ug/L	0.147	1	210	22764	3
	Mn	55	255.117	ug/L	9.327	3	314	5015491	0
	Co	59	4.493	ug/L	0.031	0	73	67859	2
>	Ge	72		ug/L			426798	449835	2
	Ni	60	12.418	ug/L	0.470	3	26	34842	4
	Ni	62	13.657	ug/L	0.294	2	48	5500	3
	Cu	63	10.909	ug/L	0.176	1	88	68751	0
	Cu	65	11.164	ug/L	0.198	1	42	31603	1
	Zn	66	37.217	ug/L	0.729	1	141	61296	1
	Zn	67	43.439	ug/L	0.835	1	21	12068	2
	Zn	68	40.380	ug/L	0.706	1	144	48150	1
	As	75	3.517	ug/L	0.133	3	220	5581	1
	As-1	75	3.522	ug/L	0.273	7	9153	15016	1
	Se	82	-0.106	ug/L	0.067	63	-1	-19	55
	Se	78	0.340	ug/L	0.550	161	9315	9960	0
	Mo	98	0.299	ug/L	0.003	0	35	1224	3
	Y	89		ug/L			271155	386473	1
	Kr	83		ug/L			529	768	6
>	In	115		ug/L			840042	857471	0
	Ag	107	0.094	ug/L	0.009	9	32	1085	9
	Cd	111	0.271	ug/L	0.030	11	72	1231	10
	Cd	114	0.123	ug/L	0.005	4	44	1356	4
	Sb	121	-0.003	ug/L	0.002	57	346	310	8
	Sb	123	-0.003	ug/L	0.003	79	257	228	12
	Ba	135	98.466	ug/L	1.560	1	17	379745	2
	Ba	137	97.767	ug/L	1.583	1	19	652216	2
>	Tb	159		ug/L			1001666	1026568	0
	Tl	205	0.074	ug/L	0.003	3	206	2602	4
	Pb	208	8.270	ug/L	0.044	0	157	340087	1
	Bi	209		ug/L			2293546	2308833	0
	Th	232	5.347	ug/L	0.086	1	1512	212665	1
	U	238	0.747	ug/L	0.006	0	29	31671	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	716437	0
[	Be	9	0.401	ug/L	0.018	4	8	1020	5
	C	13		ug/L			63994	99871	1
	Cl	37		ug/L			3532807	3848632	4
[>	Sc	45		ug/L			674505	835805	1
[	V	51	18.125	ug/L	0.646	3	6013	307275	1
[	V-1	51	17.973	ug/L	0.759	4	387	300226	2
[	Cr	52	19.363	ug/L	0.103	0	17778	298907	1
[	Cr	53	18.844	ug/L	0.491	2	210	31522	0
[	Mn	55	609.241	ug/L	14.112	2	314	11988562	0
[	Co	59	5.059	ug/L	0.066	1	73	76435	0
[>	Ge	72		ug/L			426798	448508	2
[	Ni	60	13.524	ug/L	0.642	4	26	37808	3
[	Ni	62	14.544	ug/L	0.275	1	48	5835	0
[	Cu	63	14.542	ug/L	0.622	4	88	91306	1
[	Cu	65	14.814	ug/L	0.289	1	42	41796	1
[	Zn	66	136.705	ug/L	3.860	2	141	224076	2
[	Zn	67	141.945	ug/L	4.566	3	21	39262	2
[	Zn	68	145.356	ug/L	3.537	2	144	172427	2
[	As	75	8.462	ug/L	0.216	2	220	13063	0
[	As-1	75	8.378	ug/L	0.319	3	9153	22361	0
[	Se	82	-0.117	ug/L	0.111	95	-1	-21	88
[	Se	78	0.084	ug/L	0.465	555	9315	9822	0
[	Mo	98	0.343	ug/L	0.009	2	35	1396	2
	Y	89		ug/L			271155	387096	1
	Kr	83		ug/L			529	773	2
[>	In	115		ug/L			840042	843928	1
[	Ag	107	0.097	ug/L	0.003	2	32	1098	1
[	Cd	111	2.295	ug/L	0.054	2	72	9718	1
[	Cd	114	2.222	ug/L	0.039	1	44	23255	0
[	Sb	121	0.089	ug/L	0.005	5	346	1493	4
[	Sb	123	0.090	ug/L	0.004	4	257	1143	4
[	Ba	135	260.374	ug/L	2.176	0	17	988268	2
[	Ba	137	260.305	ug/L	1.896	0	19	1708848	0
[>	Tb	159		ug/L			1001666	1016988	1
[	Tl	205	0.121	ug/L	0.002	1	206	4049	1
[	Pb	208	103.483	ug/L	0.763	0	157	4213803	0
[	Bi	209		ug/L			2293546	2262406	0
[	Th	232	4.735	ug/L	0.042	0	1512	186728	0
[	U	238	0.488	ug/L	0.008	1	29	20508	1

ICP-MS Quantitative Analysis - Summary Report

Pb Zn

Sample ID: VR32 L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:03:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	711201	2
[	Be	9	0.171	ug/L	0.006	3	8	438	2
	C	13		ug/L			63994	84334	2
	Cl	37		ug/L			3532807	3961001	3
[>	Sc	45		ug/L			674505	822497	3
[	V	51	6.143	ug/L	0.151	2	6013	107327	0
[	V-1	51	6.293	ug/L	0.192	3	387	103745	1
[	Cr	52	15.612	ug/L	0.486	3	17778	241268	2
[	Cr	53	15.845	ug/L	0.464	2	210	26117	0
[	Mn	55	449.891	ug/L	4.700	1	314	8714806	3
[	Co	59	3.758	ug/L	0.118	3	73	55873	0
[>	Ge	72		ug/L			426798	449687	0
[	Ni	60	14.836	ug/L	0.146	0	26	41604	1
[	Ni	62	15.897	ug/L	0.594	3	48	6391	3
[	Cu	63	9.600	ug/L	0.092	0	88	60505	1
[	Cu	65	10.011	ug/L	0.238	2	42	28338	2
[	Zn	66	133.932	ug/L	1.553	1	141	220179	1
[	Zn	67	130.405	ug/L	2.921	2	21	36174	1
[	Zn	68	136.432	ug/L	2.195	1	144	162295	1
[	As	75	3.615	ug/L	0.018	0	220	5731	0
[	As-1	75	3.573	ug/L	0.055	1	9153	15095	0
[	Se	82	0.031	ug/L	0.040	129	-1	3	210
[	Se	78	0.070	ug/L	0.195	281	9315	9845	0
[	Mo	98	0.152	ug/L	0.004	2	35	639	3
	Y	89		ug/L			271155	319304	2
	Kr	83		ug/L			529	637	1
[>	In	115		ug/L			840042	868798	0
[	Ag	107	0.065	ug/L	0.002	3	32	773	2
[	Cd	111	2.393	ug/L	0.032	1	72	10433	0
[	Cd	114	2.281	ug/L	0.005	0	44	24578	0
[	Sb	121	0.020	ug/L	0.002	9	346	624	4
[	Sb	123	0.019	ug/L	0.002	9	257	463	3
[	Ba	135	166.322	ug/L	2.496	1	17	649829	1
[	Ba	137	168.529	ug/L	2.972	1	19	1138963	1
[>	Tb	159		ug/L			1001666	1021920	0
[	Tl	205	0.114	ug/L	0.002	1	206	3847	1
[	Pb	208	102.715	ug/L	0.505	0	157	4202939	0
[	Bi	209		ug/L			2293546	2335155	0
[	Th	232	1.250	ug/L	0.015	1	1512	50665	0
[	U	238	0.159	ug/L	0.002	1	29	6743	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:07:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	695254	0
[	Be	9	0.854	ug/L	0.021	2	8	2098	3
	C	13		ug/L			63994	131576	3
	Cl	37		ug/L			3532807	3890752	1
[>	Sc	45		ug/L			674505	874272	1
[	V	51	28.436	ug/L	0.884	3	6013	500170	4
[	V-1	51	28.675	ug/L	0.567	1	387	501071	3
[	Cr	52	73.085	ug/L	1.587	2	17778	1116388	3
[	Cr	53	72.682	ug/L	0.944	1	210	126439	1
[	Mn	55	2076.405	ug/L	33.940	1	314	42753724	2
[	Co	59	17.252	ug/L	0.278	1	73	272407	0
[>	Ge	72		ug/L			426798	438853	1
[	Ni	60	72.171	ug/L	1.178	1	26	197391	1
[	Ni	62	76.832	ug/L	0.479	0	48	29957	1
[	Cu	63	46.638	ug/L	1.266	2	88	286477	2
[	Cu	65	47.106	ug/L	1.192	2	42	129954	1
[	Zn	66	622.935	ug/L	17.773	2	141	998626	1
[	Zn	67	596.053	ug/L	7.803	1	21	161279	1
[	Zn	68	644.376	ug/L	16.164	2	144	747581	3
[	As	75	17.414	ug/L	0.394	2	220	26073	1
[	As-1	75	17.319	ug/L	0.518	2	9153	35196	1
[	Se	82	0.083	ug/L	0.111	133	-1	11	155
[	Se	78	0.530	ug/L	0.542	102	9315	9799	1
[	Mo	98	0.719	ug/L	0.020	2	35	2824	1
	Y	89		ug/L			271155	457727	0
	Kr	83		ug/L			529	856	1
[>	In	115		ug/L			840042	878162	0
[	Ag	107	0.299	ug/L	0.001	0	32	3464	0
[	Cd	111	10.706	ug/L	0.168	1	72	46909	1
[	Cd	114	10.444	ug/L	0.063	0	44	113577	0
[	Sb	121	0.162	ug/L	0.009	5	346	2549	5
[	Sb	123	0.164	ug/L	0.002	1	257	1947	1
[	Ba	135	849.071	ug/L	6.534	0	17	3353182	0
[	Ba	137	843.640	ug/L	17.054	2	19	5763468	2
[>	Tb	159		ug/L			1001666	1014559	1
[	Tl	205	0.561	ug/L	0.009	1	206	18053	1
[	Pb	208	500.833	ug/L	4.487	0	157	20344752	0
[	Bi	209		ug/L			2293546	2173022	0
[	Th	232	5.995	ug/L	0.062	1	1512	235488	2
[	U	238	0.778	ug/L	0.002	0	29	32601	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:12:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	718068	1
[	Be	9	0.437	ug/L	0.005	1	8	1114	0
	C	13		ug/L			63994	110133	0
	Cl	37		ug/L			3532807	3913424	3
[>	Sc	45		ug/L			674505	871177	1
[	V	51	16.866	ug/L	0.353	2	6013	298672	1
[	V-1	51	16.801	ug/L	0.293	1	387	292680	1
[	Cr	52	13.424	ug/L	0.201	1	17778	223016	0
[	Cr	53	13.307	ug/L	0.363	2	210	23284	1
[	Mn	55	779.533	ug/L	24.460	3	314	15989333	2
[	Co	59	4.419	ug/L	0.173	3	73	69582	2
[>	Ge	72		ug/L			426798	464937	0
[	Ni	60	12.240	ug/L	0.273	2	26	35488	1
[	Ni	62	13.507	ug/L	0.176	1	48	5622	0
[	Cu	63	14.222	ug/L	0.247	1	88	92625	1
[	Cu	65	14.276	ug/L	0.064	0	42	41763	0
[	Zn	66	235.187	ug/L	3.257	1	141	399604	1
[	Zn	67	227.518	ug/L	4.728	2	21	65236	1
[	Zn	68	235.693	ug/L	4.009	1	144	289773	1
[	As	75	8.120	ug/L	0.059	0	220	13010	1
[	As-1	75	8.035	ug/L	0.038	0	9153	22646	0
[	Se	82	-0.003	ug/L	0.108	3591	-1	-2	715
[	Se	78	0.125	ug/L	0.286	228	9315	10203	0
[	Mo	98	0.339	ug/L	0.010	2	35	1429	2
	Y	89		ug/L			271155	375942	1
	Kr	83		ug/L			529	767	1
[>	In	115		ug/L			840042	879760	0
[	Ag	107	0.131	ug/L	0.003	2	32	1534	2
[	Cd	111	3.584	ug/L	0.023	0	72	15784	0
[	Cd	114	3.466	ug/L	0.031	0	44	37788	0
[	Sb	121	0.112	ug/L	0.001	0	346	1869	0
[	Sb	123	0.120	ug/L	0.010	8	257	1501	6
[	Ba	135	284.161	ug/L	1.684	0	17	1124268	0
[	Ba	137	283.599	ug/L	1.361	0	19	1940917	0
[>	Tb	159		ug/L			1001666	1036085	1
[	Tl	205	0.195	ug/L	0.005	2	206	6532	1
[	Pb	208	196.032	ug/L	3.347	1	157	8130963	0
[	Bi	209		ug/L			2293546	2295466	1
[	Th	232	4.110	ug/L	0.119	2	1512	165291	1
[	U	238	0.708	ug/L	0.015	2	29	30316	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 19:16:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			681751	719924	1
[	**Be**	**9**	**0.863**	ug/L	0.018	2	8	2196	2
	C	**13**		ug/L			63994	117998	1
	Cl	**37**		ug/L			3532807	4052008	2
[>	**Sc**	**45**		ug/L			674505	942416	2
[	**V**	**51**	**31.075**	ug/L	1.296	4	6013	588134	4
[	**V-1**	**51**	**31.170**	ug/L	0.137	0	387	586996	2
[	**Cr**	**52**	**87.113**	ug/L	1.934	2	17778	1428921	0
[	**Cr**	**53**	**85.943**	ug/L	3.129	3	210	161104	4
[	**Mn**	**55**	**1408.012**	ug/L	17.539	1	314	31242842	1
[	**Co**	**59**	**17.012**	ug/L	0.484	2	73	289471	0
[>	**Ge**	**72**		ug/L			426798	455844	1
[	**Ni**	**60**	**89.600**	ug/L	2.900	3	26	254480	2
[	**Ni**	**62**	**93.872**	ug/L	3.734	3	48	37993	2
[	**Cu**	**63**	**42.292**	ug/L	0.992	2	88	269833	1
[	**Cu**	**65**	**42.820**	ug/L	0.547	1	42	122715	0
[	**Zn**	**66**	**426.129**	ug/L	11.006	2	141	709739	2
[	**Zn**	**67**	**425.743**	ug/L	7.027	1	21	119656	1
[	**Zn**	**68**	**437.373**	ug/L	6.370	1	144	527012	0
[	**As**	**75**	**16.524**	ug/L	0.232	1	220	25710	1
[	**As-1**	**75**	**16.482**	ug/L	0.339	2	9153	35266	1
[	**Se**	**82**	**0.055**	ug/L	0.110	201	-1	7	252
[	**Se**	**78**	**0.662**	ug/L	0.378	57	9315	10236	1
[	**Mo**	**98**	**0.656**	ug/L	0.027	4	35	2679	2
	Y	**89**		ug/L			271155	443231	1
	Kr	**83**		ug/L			529	878	5
[>	**In**	**115**		ug/L			840042	871070	0
[	**Ag**	**107**	**0.290**	ug/L	0.006	1	32	3335	1
[	**Cd**	**111**	**6.478**	ug/L	0.081	1	72	28183	0
[	**Cd**	**114**	**6.308**	ug/L	0.056	0	44	68063	0
[	**Sb**	**121**	**0.051**	ug/L	0.004	8	346	1042	5
[	**Sb**	**123**	**0.052**	ug/L	0.003	5	257	791	4
[	**Ba**	**135**	**753.901**	ug/L	7.627	1	17	2953351	1
[	**Ba**	**137**	**746.967**	ug/L	5.655	0	19	5061727	1
[>	**Tb**	**159**		ug/L			1001666	1035124	0
[	**Tl**	**205**	**0.483**	ug/L	0.006	1	206	15871	1
[	**Pb**	**208**	**338.391**	ug/L	2.883	0	157	14024866	0
[	**Bi**	**209**		ug/L			2293546	2203123	0
[	**Th**	**232**	**5.877**	ug/L	0.069	1	1512	235523	0
[	**U**	**238**	**0.789**	ug/L	0.003	0	29	33751	0

VR33 : 00422

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 19:20:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	714773	2
	Be	9	51.803	ug/L	1.085	2	8	130335	0
	C	13		ug/L			63994	75101	0
	Cl	37		ug/L			3532807	4182247	1
>	Sc	45		ug/L			674505	832095	2
	V	51	47.312	ug/L	0.931	1	6013	786741	0
	V-1	51	47.527	ug/L	0.674	1	387	789879	1
	Cr	52	46.679	ug/L	1.800	3	17778	686101	1
	Cr	53	47.386	ug/L	0.859	1	210	78533	1
	Mn	55	45.912	ug/L	1.067	2	314	899782	0
	Co	59	45.230	ug/L	1.300	2	73	679551	2
>	Ge	72		ug/L			426798	459393	1
	Ni	60	51.193	ug/L	0.678	1	26	146573	0
	Ni	62	49.884	ug/L	1.182	2	48	20375	1
	Cu	63	50.908	ug/L	1.049	2	88	327330	1
	Cu	65	50.967	ug/L	1.408	2	42	147186	1
	Zn	66	50.882	ug/L	0.997	1	141	85539	1
	Zn	67	50.716	ug/L	0.577	1	21	14386	1
	Zn	68	50.953	ug/L	0.749	1	144	62014	0
	As	75	50.796	ug/L	0.352	0	220	79165	0
	As-1	75	50.695	ug/L	0.250	0	9153	88876	0
	Se	82	51.479	ug/L	1.125	2	-1	8772	1
	Se	78	51.163	ug/L	0.764	1	9315	32457	0
	Mo	98	49.240	ug/L	0.878	1	35	199762	2
	Y	89		ug/L			271155	296886	0
	Kr	83		ug/L			529	633	8
>	In	115		ug/L			840042	843893	1
	Ag	107	50.912	ug/L	0.435	0	32	560623	1
	Cd	111	49.685	ug/L	0.832	1	72	208909	0
	Cd	114	50.740	ug/L	0.516	1	44	530060	0
	Sb	121	49.246	ug/L	0.969	1	346	637753	0
	Sb	123	48.930	ug/L	0.637	1	257	481203	0
	Ba	135	49.142	ug/L	0.654	1	17	186497	0
	Ba	137	49.112	ug/L	0.898	1	19	322385	0
>	Tb	159		ug/L			1001666	1011766	0
	Tl	205	48.564	ug/L	0.201	0	206	1539532	0
	Pb	208	49.714	ug/L	0.316	0	157	2014122	0
	Bi	209		ug/L			2293546	2267245	0
	Th	232	47.758	ug/L	0.446	0	1512	1860009	0
	U	238	52.230	ug/L	0.076	0	29	2181966	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 19:27:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	722302	1
	Be	9	0.001	ug/L	0.001	70	8	12	16
	C	13		ug/L			63994	73459	1
	Cl	37		ug/L			3532807	3981251	4
>	Sc	45		ug/L			674505	821911	0
	V	51	-0.023	ug/L	0.006	26	6013	6958	1
	V-1	51	-0.023	ug/L	0.001	4	387	97	17
	Cr	52	-0.086	ug/L	0.018	20	17778	20454	1
	Cr	53	-0.085	ug/L	0.003	3	210	117	3
	Mn	55	0.009	ug/L	0.005	57	314	559	18
	Co	59	0.001	ug/L	0.000	64	73	99	7
>	Ge	72		ug/L			426798	461699	0
	Ni	60	0.001	ug/L	0.000	10	26	31	1
	Ni	62	-0.014	ug/L	0.017	125	48	46	15
	Cu	63	-0.000	ug/L	0.002	804	88	94	13
	Cu	65	-0.003	ug/L	0.003	116	42	37	24
	Zn	66	-0.011	ug/L	0.006	59	141	135	8
	Zn	67	0.011	ug/L	0.005	47	21	26	5
	Zn	68	-0.000	ug/L	0.014	3247	144	155	11
	As	75	0.027	ug/L	0.010	37	220	281	4
	As-1	75	0.125	ug/L	0.119	95	9153	10096	1
	Se	82	0.003	ug/L	0.018	598	-1	-1	201
	Se	78	0.388	ug/L	0.405	104	9315	10247	1
	Mo	98	0.001	ug/L	0.003	390	35	41	25
	Y	89		ug/L			271155	291107	2
	Kr	83		ug/L			529	593	1
>	In	115		ug/L			840042	834594	1
	Ag	107	0.000	ug/L	0.002	666	32	35	49
	Cd	111	0.003	ug/L	0.005	183	72	84	25
	Cd	114	0.002	ug/L	0.003	204	44	61	56
	Sb	121	0.029	ug/L	0.003	9	346	709	3
	Sb	123	0.031	ug/L	0.005	16	257	558	8
	Ba	135	0.006	ug/L	0.008	143	17	38	77
	Ba	137	0.007	ug/L	0.007	109	19	61	75
>	Tb	159		ug/L			1001666	996801	0
	Tl	205	0.005	ug/L	0.003	67	206	366	30
	Pb	208	0.005	ug/L	0.003	72	157	340	39
	Bi	209		ug/L			2293546	2324828	1
	Th	232	0.063	ug/L	0.004	6	1512	3906	3
	U	238	0.002	ug/L	0.002	73	29	115	54

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A-L SWN
Sample Dil Factor: 500
Comments:
Sample Date/Time: Friday, November 16, 2012 19:35:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	729812	1
[	Be	9	0.017	ug/L	0.001	4	8	53	3
	C	13		ug/L			63994	77428	0
	Cl	37		ug/L			3532807	3845449	4
[>	Sc	45		ug/L			674505	826368	1
[	V	51	0.667	ug/L	0.011	1	6013	18283	1
[	V-1	51	0.675	ug/L	0.015	2	387	11615	2
[	Cr	52	0.654	ug/L	0.039	5	17778	31028	1
[	Cr	53	0.681	ug/L	0.052	7	210	1373	5
[	Mn	55	35.792	ug/L	0.540	1	314	696987	2
[	Co	59	0.247	ug/L	0.003	1	73	3768	0
[>	Ge	72		ug/L			426798	460217	1
[	Ni	60	0.867	ug/L	0.011	1	26	2514	2
[	Ni	62	0.902	ug/L	0.033	3	48	420	4
[	Cu	63	1.129	ug/L	0.021	1	88	7365	0
[	Cu	65	1.144	ug/L	0.034	3	42	3354	2
[	Zn	66	16.363	ug/L	0.133	0	141	27660	0
[	Zn	67	14.930	ug/L	0.231	1	21	4259	3
[	Zn	68	16.012	ug/L	0.249	1	144	19627	0
[	As	75	0.557	ug/L	0.027	4	220	1103	2
[	As-1	75	0.713	ug/L	0.214	29	9153	10981	2
[	Se	82	0.017	ug/L	0.095	575	-1	0	2305
[	Se	78	0.598	ug/L	0.700	116	9315	10305	2
[	Mo	98	0.012	ug/L	0.002	18	35	85	9
	Y	89		ug/L			271155	293004	1
	Kr	83		ug/L			529	582	5
[>	In	115		ug/L			840042	859503	0
[	Ag	107	0.008	ug/L	0.001	15	32	117	11
[	Cd	111	0.305	ug/L	0.012	4	72	1379	4
[	Cd	114	0.301	ug/L	0.001	0	44	3247	0
[	Sb	121	0.013	ug/L	0.004	30	346	528	9
[	Sb	123	0.016	ug/L	0.001	9	257	418	3
[	Ba	135	10.367	ug/L	0.122	1	17	40089	1
[	Ba	137	10.287	ug/L	0.035	0	19	68799	0
[>	Tb	159		ug/L			1001666	1018310	0
[	Tl	205	0.015	ug/L	0.004	28	206	691	19
[	Pb	208	16.676	ug/L	0.085	0	157	680081	0
[	Bi	209		ug/L			2293546	2379727	1
[	Th	232	0.142	ug/L	0.003	1	1512	7086	1
[	U	238	0.026	ug/L	0.000	0	29	1139	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:39:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	742724	2
	Be	9	0.094	ug/L	0.007	7	8	256	7
	C	13		ug/L			63994	84981	2
	Cl	37		ug/L			3532807	3946582	3
>	Sc	45		ug/L			674505	846476	1
	V	51	3.491	ug/L	0.097	2	6013	66068	3
	V-1	51	3.498	ug/L	0.065	1	387	59609	3
	Cr	52	3.682	ug/L	0.007	0	17778	75633	1
	Cr	53	3.700	ug/L	0.108	2	210	6481	1
	Mn	55	185.993	ug/L	4.275	2	314	3707816	2
	Co	59	1.209	ug/L	0.010	0	73	18579	2
>	Ge	72		ug/L			426798	463155	0
	Ni	60	4.438	ug/L	0.046	1	26	12836	0
	Ni	62	4.522	ug/L	0.121	2	48	1910	2
	Cu	63	5.794	ug/L	0.040	0	88	37650	0
	Cu	65	5.769	ug/L	0.121	2	42	16840	1
	Zn	66	82.770	ug/L	0.400	0	141	140197	0
	Zn	67	75.675	ug/L	2.264	2	21	21633	3
	Zn	68	80.715	ug/L	1.703	2	144	98954	1
	As	75	2.847	ug/L	0.033	1	220	4699	1
	As-1	75	2.936	ug/L	0.104	3	9153	14546	0
	Se	82	-0.022	ug/L	0.080	364	-1	-5	238
	Se	78	0.410	ug/L	0.273	66	9315	10290	0
	Mo	98	0.051	ug/L	0.002	4	35	245	3
	Y	89		ug/L			271155	315783	2
	Kr	83		ug/L			529	622	6
>	In	115		ug/L			840042	870252	1
	Ag	107	0.043	ug/L	0.004	9	32	519	7
	Cd	111	1.538	ug/L	0.014	0	72	6742	0
	Cd	114	1.511	ug/L	0.025	1	44	16319	0
	Sb	121	0.109	ug/L	0.004	3	346	1808	2
	Sb	123	0.103	ug/L	0.004	3	257	1315	3
	Ba	135	52.795	ug/L	0.896	1	17	206620	1
	Ba	137	52.215	ug/L	0.766	1	19	353470	0
>	Tb	159		ug/L			1001666	1023886	0
	Tl	205	0.060	ug/L	0.003	5	206	2150	6
	Pb	208	84.276	ug/L	1.041	1	157	3454938	0
	Bi	209		ug/L			2293546	2371096	0
	Th	232	0.701	ug/L	0.021	3	1512	29164	2
	U	238	0.136	ug/L	0.002	1	29	5795	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:43:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	721529	2
	Be	9	0.093	ug/L	0.006	6	8	244	8
	C	13		ug/L			63994	84203	0
	Cl	37		ug/L			3532807	3893775	3
>	Sc	45		ug/L			674505	859024	2
	V	51	3.048	ug/L	0.091	2	6013	59485	1
	V-1	51	3.036	ug/L	0.059	1	387	52547	1
	Cr	52	3.066	ug/L	0.141	4	17778	67678	1
	Cr	53	3.026	ug/L	0.052	1	210	5428	3
	Mn	55	183.326	ug/L	5.544	3	314	3707612	1
	Co	59	1.115	ug/L	0.046	4	73	17377	3
>	Ge	72		ug/L			426798	464843	2
	Ni	60	3.278	ug/L	0.053	1	26	9523	2
	Ni	62	3.436	ug/L	0.134	3	48	1468	3
	Cu	63	5.497	ug/L	0.112	2	88	35843	0
	Cu	65	5.467	ug/L	0.126	2	42	16012	0
	Zn	66	78.915	ug/L	2.094	2	141	134108	1
	Zn	67	72.355	ug/L	2.914	4	21	20744	1
	Zn	68	77.321	ug/L	2.112	2	144	95118	1
	As	75	2.770	ug/L	0.034	1	220	4595	2
	As-1	75	2.810	ug/L	0.206	7	9153	14395	0
	Se	82	0.048	ug/L	0.089	187	-1	6	244
	Se	78	0.277	ug/L	0.622	224	9315	10264	0
	Mo	98	0.054	ug/L	0.003	5	35	259	2
	Y	89		ug/L			271155	312024	1
	Kr	83		ug/L			529	609	5
>	In	115		ug/L			840042	861767	0
	Ag	107	0.042	ug/L	0.002	4	32	505	4
	Cd	111	1.491	ug/L	0.015	0	72	6474	1
	Cd	114	1.465	ug/L	0.020	1	44	15678	1
	Sb	121	0.113	ug/L	0.002	1	346	1844	0
	Sb	123	0.115	ug/L	0.004	3	257	1415	1
	Ba	135	51.281	ug/L	0.075	0	17	198758	0
	Ba	137	50.614	ug/L	0.817	1	19	339307	0
>	Tb	159		ug/L			1001666	1015290	0
	Tl	205	0.058	ug/L	0.002	2	206	2051	2
	Pb	208	80.808	ug/L	0.354	0	157	3285158	0
	Bi	209		ug/L			2293546	2354843	0
	Th	232	0.674	ug/L	0.009	1	1512	27843	0
	U	238	0.136	ug/L	0.002	1	29	5744	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:48:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Bn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	711145	0
	Be	9	5.039	ug/L	0.086	1	8	12623	1
	C	13		ug/L			63994	81486	2
	Cl	37		ug/L			3532807	3914667	5
>	Sc	45		ug/L			674505	810657	1
	V	51	7.974	ug/L	0.166	2	6013	135200	1
	V-1	51	7.874	ug/L	0.108	1	387	127889	1
	Cr	52	7.755	ug/L	0.312	4	17778	128879	1
	Cr	53	7.439	ug/L	0.035	0	210	12225	1
	Mn	55	196.093	ug/L	3.826	1	314	3743698	2
	Co	59	5.480	ug/L	0.128	2	73	80299	2
>	Ge	72		ug/L			426798	467258	1
	Ni	60	8.228	ug/L	0.166	2	26	23985	1
	Ni	62	8.332	ug/L	0.285	3	48	3506	3
	Cu	63	10.268	ug/L	0.366	3	88	67224	2
	Cu	65	10.427	ug/L	0.250	2	42	30673	3
	Zn	66	95.661	ug/L	2.945	3	141	163428	2
	Zn	67	86.936	ug/L	1.721	1	21	25063	1
	Zn	68	95.182	ug/L	2.725	2	144	117675	1
	As	75	7.522	ug/L	0.173	2	220	12128	1
	As-1	75	7.466	ug/L	0.220	2	9153	21857	1
	Se	82	15.116	ug/L	0.411	2	-1	2618	1
	Se	78	14.817	ug/L	0.586	3	9315	16805	1
	Mo	98	4.096	ug/L	0.082	2	35	16935	1
	Y	89		ug/L			271155	318954	1
	Kr	83		ug/L			529	582	4
>	In	115		ug/L			840042	862695	0
	Ag	107	4.308	ug/L	0.108	2	32	48519	2
	Cd	111	6.198	ug/L	0.057	0	72	26709	0
	Cd	114	6.209	ug/L	0.086	1	44	66350	0
	Sb	121	0.457	ug/L	0.005	1	346	6400	1
	Sb	123	0.445	ug/L	0.008	1	257	4734	1
	Ba	135	57.109	ug/L	0.592	1	17	221575	0
	Ba	137	56.882	ug/L	0.561	0	19	381754	0
>	Tb	159		ug/L			1001666	1024975	0
	Tl	205	4.510	ug/L	0.019	0	206	145015	0
	Pb	208	88.285	ug/L	0.655	0	157	3623297	0
	Bi	209		ug/L			2293546	2342141	0
	Th	232	4.837	ug/L	0.054	1	1512	192228	0
	U	238	4.588	ug/L	0.068	1	29	194171	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:52:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	712629	0
	Be	9	0.221	ug/L	0.008	3	8	562	4
	C	13		ug/L			63994	82754	4
	Cl	37		ug/L			3532807	3971888	3
>	Sc	45		ug/L			674505	836432	5
	V	51	7.093	ug/L	0.262	3	6013	124834	3
	V-1	51	6.965	ug/L	0.223	3	387	116691	3
	Cr	52	20.019	ug/L	0.505	2	17778	308359	3
	Cr	53	19.268	ug/L	0.388	2	210	32240	3
	Mn	55	322.895	ug/L	8.498	2	314	6355347	2
	Co	59	3.960	ug/L	0.076	1	73	59870	3
>	Ge	72		ug/L			426798	461840	2
	Ni	60	18.651	ug/L	0.525	2	26	53692	2
	Ni	62	18.826	ug/L	0.423	2	48	7762	2
	Cu	63	8.811	ug/L	0.095	1	88	57043	2
	Cu	65	9.082	ug/L	0.339	3	42	26404	3
	Zn	66	92.365	ug/L	2.424	2	141	155957	2
	Zn	67	90.169	ug/L	1.144	1	21	25691	1
	Zn	68	94.985	ug/L	0.518	0	144	116100	2
	As	75	3.470	ug/L	0.050	1	220	5657	1
	As-1	75	3.425	ug/L	0.142	4	9153	15268	1
	Se	82	0.126	ug/L	0.073	58	-1	19	64
	Se	78	0.109	ug/L	0.397	365	9315	10125	1
	Mo	98	0.166	ug/L	0.009	5	35	713	3
	Y	89		ug/L			271155	321510	4
	Kr	83		ug/L			529	629	4
>	In	115		ug/L			840042	858166	0
	Ag	107	0.096	ug/L	0.004	3	32	1105	3
	Cd	111	1.465	ug/L	0.007	0	72	6339	0
	Cd	114	1.426	ug/L	0.027	1	44	15189	1
	Sb	121	-0.002	ug/L	0.002	97	346	328	7
	Sb	123	-0.001	ug/L	0.002	215	257	255	6
	Ba	135	148.076	ug/L	1.233	0	17	571508	1
	Ba	137	146.296	ug/L	1.374	0	19	976685	1
>	Tb	159		ug/L			1001666	1030737	1
	Tl	205	0.131	ug/L	0.004	2	206	4450	2
	Pb	208	67.656	ug/L	0.182	0	157	2792349	1
	Bi	209		ug/L			2293546	2338354	0
	Th	232	1.265	ug/L	0.024	1	1512	51690	0
	U	238	0.204	ug/L	0.001	0	29	8691	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 E SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 19:56:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

bn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	737913	1
[	Be	9	0.116	ug/L	0.000	0	8	310	1
	C	13		ug/L			63994	83267	0
	Cl	37		ug/L			3532807	4013072	1
[>	Sc	45		ug/L			674505	866552	0
[	V	51	6.037	ug/L	0.038	0	6013	111311	0
[	V-1	51	5.990	ug/L	0.018	0	387	104121	0
[	Cr	52	5.614	ug/L	0.266	4	17778	106047	2
[	Cr	53	5.472	ug/L	0.164	2	210	9684	2
[	Mn	55	192.149	ug/L	4.445	2	314	3921135	1
[	Co	59	2.067	ug/L	0.068	3	73	32429	2
[>	Ge	72		ug/L			426798	474948	1
[	Ni	60	5.060	ug/L	0.113	2	26	15002	1
[	Ni	62	5.058	ug/L	0.186	3	48	2184	4
[	Cu	63	6.086	ug/L	0.137	2	88	40537	0
[	Cu	65	6.066	ug/L	0.143	2	42	18155	2
[	Zn	66	65.633	ug/L	1.784	2	141	114014	2
[	Zn	67	62.057	ug/L	1.572	2	21	18190	1
[	Zn	68	64.714	ug/L	2.006	3	144	81371	1
[	As	75	3.817	ug/L	0.038	0	220	6376	1
[	As-1	75	3.788	ug/L	0.072	1	9153	16288	0
[	Se	82	0.031	ug/L	0.030	95	-1	3	154
[	Se	78	0.017	ug/L	0.222	1270	9315	10373	0
[	Mo	98	0.083	ug/L	0.002	2	35	388	1
	Y	89		ug/L			271155	325507	1
	Kr	83		ug/L			529	615	4
[>	In	115		ug/L			840042	870117	0
[	Ag	107	0.052	ug/L	0.003	5	32	625	5
[	Cd	111	1.349	ug/L	0.042	3	72	5923	2
[	Cd	114	1.360	ug/L	0.015	1	44	14692	1
[	Sb	121	0.019	ug/L	0.005	26	346	608	10
[	Sb	123	0.015	ug/L	0.000	1	257	420	0
[	Ba	135	57.226	ug/L	0.643	1	17	223935	0
[	Ba	137	57.421	ug/L	0.347	0	19	388698	1
[>	Tb	159		ug/L			1001666	1035898	0
[	Tl	205	0.055	ug/L	0.001	2	206	1994	2
[	Pb	208	52.939	ug/L	0.657	1	157	2195819	0
[	Bi	209		ug/L			2293546	2363818	0
[	Th	232	1.197	ug/L	0.012	0	1512	49235	0
[	U	238	0.119	ug/L	0.002	1	29	5122	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:00:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	720498	0
[	Be	9	0.541	ug/L	0.006	1	8	1382	0
	C	13		ug/L			63994	107445	2
	Cl	37		ug/L			3532807	4121040	3
[>	Sc	45		ug/L			674505	931936	1
[	V	51	32.461	ug/L	0.237	0	6013	607360	2
[	V-1	51	32.320	ug/L	0.275	0	387	601904	2
[	Cr	52	21.186	ug/L	0.290	1	17778	362323	1
[	Cr	53	21.029	ug/L	0.446	2	210	39197	1
[	Mn	55	497.382	ug/L	12.841	2	314	10912889	0
[	Co	59	7.010	ug/L	0.153	2	73	118034	1
[>	Ge	72		ug/L			426798	466141	0
[	Ni	60	16.891	ug/L	0.264	1	26	49095	1
[	Ni	62	18.926	ug/L	0.715	3	48	7877	3
[	Cu	63	23.784	ug/L	0.508	2	88	155260	2
[	Cu	65	24.689	ug/L	0.258	1	42	72382	0
[	Zn	66	198.399	ug/L	6.777	3	141	337982	3
[	Zn	67	190.189	ug/L	2.093	1	21	54679	0
[	Zn	68	197.196	ug/L	5.571	2	144	243107	2
[	As	75	9.829	ug/L	0.138	1	220	15738	0
[	As-1	75	9.856	ug/L	0.233	2	9153	25585	0
[	Se	82	0.028	ug/L	0.074	260	-1	2	446
[	Se	78	0.599	ug/L	0.306	51	9315	10440	0
[	Mo	98	0.334	ug/L	0.010	3	35	1412	3
	Y	89		ug/L			271155	432389	0
	Kr	83		ug/L			529	783	4
[>	In	115		ug/L			840042	863073	0
[	Ag	107	0.188	ug/L	0.007	3	32	2144	3
[	Cd	111	3.535	ug/L	0.027	0	72	15272	0
[	Cd	114	3.489	ug/L	0.039	1	44	37325	0
[	Sb	121	0.124	ug/L	0.020	16	346	1999	13
[	Sb	123	0.106	ug/L	0.000	0	257	1333	0
[	Ba	135	159.076	ug/L	2.046	1	17	617432	0
[	Ba	137	160.467	ug/L	2.127	1	19	1077433	1
[>	Tb	159		ug/L			1001666	1030677	0
[	Tl	205	0.202	ug/L	0.008	3	206	6738	3
[	Pb	208	145.651	ug/L	1.935	1	157	6010697	1
[	Bi	209		ug/L			2293546	2267293	2
[	Th	232	6.125	ug/L	0.085	1	1512	244331	0
[	U	238	0.745	ug/L	0.005	0	29	31742	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 20:04:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	732318	1
[	Be	9	0.110	ug/L	0.002	2	8	294	3
	C	13		ug/L			63994	81034	3
	Cl	37		ug/L			3532807	4009514	2
[>	Sc	45		ug/L			674505	871538	1
[	V	51	9.650	ug/L	0.287	2	6013	174286	2
[	V-1	51	9.656	ug/L	0.307	3	387	168482	2
[	Cr	52	6.254	ug/L	0.145	2	17778	116204	0
[	Cr	53	6.360	ug/L	0.210	3	210	11275	2
[	Mn	55	128.856	ug/L	3.127	2	314	2644624	1
[	Co	59	2.056	ug/L	0.037	1	73	32449	2
[>	Ge	72		ug/L			426798	480111	1
[	Ni	60	3.825	ug/L	0.105	2	26	11473	2
[	Ni	62	4.352	ug/L	0.083	1	48	1907	2
[	Cu	63	8.054	ug/L	0.055	0	88	54209	0
[	Cu	65	8.095	ug/L	0.262	3	42	24472	3
[	Zn	66	80.853	ug/L	1.959	2	141	141961	2
[	Zn	67	75.056	ug/L	3.424	4	21	22243	5
[	Zn	68	80.088	ug/L	0.201	0	144	101788	1
[	As	75	4.526	ug/L	0.029	0	220	7598	1
[	As-1	75	4.451	ug/L	0.026	0	9153	17547	1
[	Se	82	0.052	ug/L	0.041	78	-1	7	101
[	Se	78	-0.095	ug/L	0.106	112	9315	10435	0
[	Mo	98	0.048	ug/L	0.004	8	35	242	5
	Y	89		ug/L			271155	327703	1
	Kr	83		ug/L			529	635	3
[>	In	115		ug/L			840042	878881	0
[	Ag	107	0.052	ug/L	0.002	4	32	626	3
[	Cd	111	1.996	ug/L	0.060	3	72	8812	2
[	Cd	114	2.039	ug/L	0.050	2	44	22225	2
[	Sb	121	0.051	ug/L	0.005	8	346	1050	6
[	Sb	123	0.055	ug/L	0.002	4	257	836	3
[	Ba	135	25.857	ug/L	0.470	1	17	102212	1
[	Ba	137	25.835	ug/L	0.426	1	19	176661	1
[>	Tb	159		ug/L			1001666	1031609	0
[	Tl	205	0.077	ug/L	0.001	1	206	2699	1
[	Pb	208	81.546	ug/L	1.090	1	157	3368482	1
[	Bi	209		ug/L			2293546	2377421	0
[	Th	232	1.287	ug/L	0.012	0	1512	52637	1
[	U	238	0.131	ug/L	0.002	1	29	5624	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:09:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	740405	0
	Be	9	0.505	ug/L	0.004	0	8	1324	1
	C	13		ug/L			63994	100426	3
	Cl	37		ug/L			3532807	4050176	1
>	Sc	45		ug/L			674505	961277	2
	V	51	43.288	ug/L	1.144	2	6013	832149	0
	V-1	51	42.977	ug/L	0.918	2	387	825034	0
	Cr	52	28.216	ug/L	1.216	4	17778	489103	2
	Cr	53	27.613	ug/L	0.544	1	210	52993	2
	Mn	55	559.367	ug/L	6.412	1	314	12660873	1
	Co	59	8.740	ug/L	0.280	3	73	151758	2
>	Ge	72		ug/L			426798	467395	0
	Ni	60	18.741	ug/L	0.112	0	26	54616	0
	Ni	62	21.479	ug/L	0.342	1	48	8957	1
	Cu	63	39.057	ug/L	0.180	0	88	255563	0
	Cu	65	38.833	ug/L	0.441	1	42	114126	0
	Zn	66	377.544	ug/L	6.739	1	141	644772	1
	Zn	67	347.059	ug/L	6.578	1	21	100025	1
	Zn	68	366.278	ug/L	3.503	0	144	452630	1
	As	75	21.723	ug/L	0.078	0	220	34584	0
	As-1	75	21.709	ug/L	0.013	0	9153	44453	0
	Se	82	0.070	ug/L	0.037	52	-1	10	62
	Se	78	0.719	ug/L	0.188	26	9315	10522	0
	Mo	98	0.271	ug/L	0.007	2	35	1158	2
	Y	89		ug/L			271155	429096	1
	Kr	83		ug/L			529	836	3
>	In	115		ug/L			840042	898587	1
	Ag	107	0.237	ug/L	0.011	4	32	2810	4
	Cd	111	9.135	ug/L	0.138	1	72	40965	0
	Cd	114	9.045	ug/L	0.147	1	44	100654	0
	Sb	121	0.326	ug/L	0.005	1	346	4869	1
	Sb	123	0.331	ug/L	0.005	1	257	3738	0
	Ba	135	119.456	ug/L	1.495	1	17	482728	0
	Ba	137	120.425	ug/L	0.608	0	19	841862	1
>	Tb	159		ug/L			1001666	1033632	0
	Tl	205	0.390	ug/L	0.006	1	206	12840	1
	Pb	208	406.297	ug/L	3.228	0	157	16814924	0
	Bi	209		ug/L			2293546	2266880	0
	Th	232	6.282	ug/L	0.041	0	1512	251312	0
	U	238	0.616	ug/L	0.015	2	29	26329	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:13:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	728518	1
[	Be	9	0.948	ug/L	0.015	1	8	2440	2
	C	13		ug/L			63994	106394	0
	Cl	37		ug/L			3532807	4096322	2
[>	Sc	45		ug/L			674505	957979	1
[	V	51	35.125	ug/L	1.048	2	6013	674702	2
[	V-1	51	34.820	ug/L	0.996	2	387	666353	1
[	Cr	52	60.745	ug/L	1.984	3	17778	1020636	2
[	Cr	53	59.088	ug/L	1.855	3	210	112661	1
[	Mn	55	1301.293	ug/L	40.486	3	314	29350765	2
[	Co	59	10.054	ug/L	0.431	4	73	173947	2
[>	Ge	72		ug/L			426798	462533	0
[	Ni	60	63.963	ug/L	0.422	0	26	184403	1
[	Ni	62	65.428	ug/L	0.494	0	48	26895	1
[	Cu	63	23.709	ug/L	0.537	2	88	153543	1
[	Cu	65	23.930	ug/L	0.557	2	42	69613	2
[	Zn	66	297.823	ug/L	6.623	2	141	503343	1
[	Zn	67	295.440	ug/L	12.520	4	21	84258	3
[	Zn	68	306.585	ug/L	4.290	1	144	374947	1
[	As	75	16.588	ug/L	0.301	1	220	26190	1
[	As-1	75	16.671	ug/L	0.299	1	9153	36082	0
[	Se	82	-0.309	ug/L	0.057	18	-1	-55	17
[	Se	78	0.783	ug/L	0.254	32	9315	10440	0
[	Mo	98	0.527	ug/L	0.015	2	35	2192	3
	Y	89		ug/L			271155	401332	1
	Kr	83		ug/L			529	913	0
[>	In	115		ug/L			840042	841269	1
[	Ag	107	0.190	ug/L	0.009	4	32	2112	3
[	Cd	111	4.156	ug/L	0.107	2	72	17486	0
[	Cd	114	4.109	ug/L	0.170	4	44	42814	2
[	Sb	121	0.035	ug/L	0.003	7	346	802	2
[	Sb	123	0.036	ug/L	0.003	9	257	606	3
[	Ba	135	467.970	ug/L	14.501	3	17	1769878	1
[	Ba	137	486.289	ug/L	17.679	3	19	3181171	1
[>	Tb	159		ug/L			1001666	1017480	0
[	Tl	205	0.237	ug/L	0.005	2	206	7759	2
[	Pb	208	188.357	ug/L	2.949	1	157	7673339	1
[	Bi	209		ug/L			2293546	2238291	0
[	Th	232	5.589	ug/L	0.062	1	1512	220256	0
[	U	238	0.546	ug/L	0.011	2	29	22956	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 20:18:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	714361	1
	Be	9	53.268	ug/L	1.034	1	8	133969	1
	C	13		ug/L			63994	76326	1
	Cl	37		ug/L			3532807	4137131	2
>	Sc	45		ug/L			674505	855160	1
	V	51	47.408	ug/L	0.195	0	6013	810376	0
	V-1	51	47.387	ug/L	0.470	0	387	809481	0
	Cr	52	45.766	ug/L	0.985	2	17778	692107	2
	Cr	53	45.741	ug/L	1.073	2	210	77921	1
	Mn	55	45.803	ug/L	0.803	1	314	922699	0
	Co	59	44.846	ug/L	1.293	2	73	692454	1
>	Ge	72		ug/L			426798	474413	0
	Ni	60	50.448	ug/L	0.383	0	26	149177	0
	Ni	62	49.482	ug/L	0.672	1	48	20875	0
	Cu	63	50.172	ug/L	0.481	0	88	333185	0
	Cu	65	50.316	ug/L	1.174	2	42	150077	1
	Zn	66	50.422	ug/L	0.224	0	141	87544	0
	Zn	67	49.071	ug/L	0.656	1	21	14376	1
	Zn	68	49.689	ug/L	0.038	0	144	62463	0
	As	75	49.191	ug/L	0.655	1	220	79178	0
	As-1	75	49.295	ug/L	0.419	0	9153	89528	0
	Se	82	49.488	ug/L	1.203	2	-1	8709	2
	Se	78	49.860	ug/L	0.174	0	9315	32931	0
	Mo	98	47.434	ug/L	0.157	0	35	198721	0
	Y	89		ug/L			271155	298189	3
	Kr	83		ug/L			529	627	2
>	In	115		ug/L			840042	846625	0
	Ag	107	49.032	ug/L	0.701	1	32	541679	2
	Cd	111	49.979	ug/L	0.629	1	72	210861	1
	Cd	114	50.181	ug/L	0.622	1	44	525990	2
	Sb	121	48.950	ug/L	0.492	1	346	636033	0
	Sb	123	49.055	ug/L	0.634	1	257	484019	1
	Ba	135	48.879	ug/L	0.798	1	17	186108	1
	Ba	137	48.817	ug/L	0.347	0	19	321522	0
>	Tb	159		ug/L			1001666	1023308	1
	Tl	205	47.505	ug/L	0.650	1	206	1522946	0
	Pb	208	48.658	ug/L	0.540	1	157	1993638	0
	Bi	209		ug/L			2293546	2285658	0
	Th	232	46.753	ug/L	0.907	1	1512	1841369	0
	U	238	50.336	ug/L	2.867	5	29	2126316	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 20:24:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	713347	1
[	Be	9	0.002	ug/L	0.002	90	8	14	34
	C	13		ug/L			63994	75773	1
	Cl	37		ug/L			3532807	3901506	1
[>	Sc	45		ug/L			674505	834394	2
[	V	51	-0.015	ug/L	0.006	38	6013	7190	1
[	V-1	51	-0.023	ug/L	0.002	7	387	94	31
[	Cr	52	-0.062	ug/L	0.026	42	17778	21104	1
[	Cr	53	-0.087	ug/L	0.008	9	210	115	10
[	Mn	55	0.020	ug/L	0.031	152	314	796	79
[	Co	59	-0.000	ug/L	0.000	94	73	83	10
[>	Ge	72		ug/L			426798	458353	1
[	Ni	60	-0.002	ug/L	0.003	191	26	23	35
[	Ni	62	-0.032	ug/L	0.019	59	48	39	20
[	Cu	63	-0.001	ug/L	0.002	116	88	86	12
[	Cu	65	0.000	ug/L	0.004	4231	42	45	24
[	Zn	66	-0.002	ug/L	0.011	501	141	148	12
[	Zn	67	0.007	ug/L	0.012	161	21	25	14
[	Zn	68	-0.003	ug/L	0.022	775	144	151	17
[	As	75	0.006	ug/L	0.006	94	220	246	3
[	As-1	75	0.231	ug/L	0.109	47	9153	10187	0
[	Se	82	-0.028	ug/L	0.024	86	-1	-6	60
[	Se	78	0.826	ug/L	0.386	46	9315	10364	0
[	Mo	98	0.000	ug/L	0.001	752	35	39	10
	Y	89		ug/L			271155	291001	1
	Kr	83		ug/L			529	600	1
[>	In	115		ug/L			840042	833657	1
[	Ag	107	-0.000	ug/L	0.000	72	32	29	9
[	Cd	111	-0.000	ug/L	0.001	550	72	71	6
[	Cd	114	-0.001	ug/L	0.001	68	44	29	35
[	Sb	121	0.025	ug/L	0.006	23	346	664	10
[	Sb	123	0.026	ug/L	0.006	23	257	506	12
[	Ba	135	0.010	ug/L	0.015	154	17	53	104
[	Ba	137	0.016	ug/L	0.024	149	19	119	125
[>	Tb	159		ug/L			1001666	982159	0
[	Tl	205	0.007	ug/L	0.006	86	206	403	42
[	Pb	208	0.016	ug/L	0.022	142	157	773	113
[	Bi	209		ug/L			2293546	2322252	1
[	Th	232	0.062	ug/L	0.002	3	1512	3822	2
[	U	238	0.001	ug/L	0.001	60	29	87	40

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:29:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	723580	1
	Be	9	~0.000	ug/L	0.002	554	8	10	45
	C	13		ug/L			63994	79120	1
	Cl	37		ug/L			3532807	4110660	4
>	Sc	45		ug/L			674505	836487	2
	V	51	-0.017	ug/L	0.009	49	6013	7165	0
	V-1	51	-0.024	ug/L	0.000	2	387	83	9
	Cr	52	-0.058	ug/L	0.026	44	17778	21208	0
	Cr	53	-0.078	ug/L	0.008	9	210	131	10
	Mn	55	0.020	ug/L	0.002	7	314	782	2
	Co	59	0.004	ug/L	0.000	8	73	144	4
>	Ge	72		ug/L			426798	458918	1
	Ni	60	0.002	ug/L	0.001	54	26	34	9
	Ni	62	-0.042	ug/L	0.012	28	48	35	15
	Cu	63	0.443	ug/L	0.005	1	88	2941	1
	Cu	65	0.456	ug/L	0.016	3	42	1360	4
	Zn	66	0.763	ug/L	0.021	2	141	1432	3
	Zn	67	0.693	ug/L	0.046	6	21	219	7
	Zn	68	0.694	ug/L	0.023	3	144	997	3
	As	75	0.001	ug/L	0.017	2584	220	238	9
	As-1	75	0.296	ug/L	0.056	18	9153	10301	0
	Se	82	-0.030	ug/L	0.084	281	-1	-7	200
	Se	78	1.058	ug/L	0.207	19	9315	10479	0
	Mo	98	-0.005	ug/L	0.001	15	35	17	19
	Y	89		ug/L			271155	292564	1
	Kr	83		ug/L			529	592	3
>	In	115		ug/L			840042	855981	0
	Ag	107	-0.001	ug/L	0.000	13	32	22	7
	Cd	111	-0.003	ug/L	0.000	14	72	63	1
	Cd	114	-0.001	ug/L	0.001	87	44	39	13
	Sb	121	-0.009	ug/L	0.002	25	346	230	12
	Sb	123	-0.009	ug/L	0.002	25	257	175	12
	Ba	135	0.005	ug/L	0.002	38	17	35	19
	Ba	137	0.007	ug/L	0.001	18	19	64	12
>	Tb	159		ug/L			1001666	994826	0
	Tl	205	0.003	ug/L	0.003	126	206	290	36
	Pb	208	0.024	ug/L	0.001	2	157	1102	1
	Bi	209		ug/L			2293546	2319151	0
	Th	232	0.038	ug/L	0.012	30	1512	2948	15
	U	238	-0.000	ug/L	0.000	81	29	23	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:33:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	721392	1
	Be	9	26.677	ug/L	0.687	2	8	67755	2
	C	13		ug/L			63994	75451	1
	Cl	37		ug/L			3532807	3953510	3
>	Sc	45		ug/L			674505	858522	3
	V	51	24.220	ug/L	0.849	3	6013	419019	0
	V-1	51	24.059	ug/L	0.877	3	387	412483	0
	Cr	52	24.050	ug/L	0.878	3	17778	375573	0
	Cr	53	23.538	ug/L	0.983	4	210	40349	0
	Mn	55	23.542	ug/L	0.947	4	314	475921	1
	Co	59	22.867	ug/L	0.895	3	73	354310	2
>	Ge	72		ug/L			426798	465989	0
	Ni	60	27.227	ug/L	0.548	2	26	79098	2
	Ni	62	26.644	ug/L	0.308	1	48	11065	0
	Cu	63	26.901	ug/L	0.350	1	88	175518	1
	Cu	65	26.836	ug/L	0.343	1	42	78648	1
	Zn	66	85.048	ug/L	2.134	2	141	144940	2
	Zn	67	76.642	ug/L	0.165	0	21	22041	0
	Zn	68	82.237	ug/L	0.424	0	144	101440	0
	As	75	25.648	ug/L	0.170	0	220	40665	0
	As-1	75	26.079	ug/L	0.458	1	9153	51228	0
	Se	82	82.320	ug/L	0.064	0	-1	14233	0
	Se	78	83.077	ug/L	1.408	1	9315	47118	1
	Mo	98	24.335	ug/L	0.103	0	35	100158	0
	Y	89		ug/L			271155	295935	1
	Kr	83		ug/L			529	561	10
>	In	115		ug/L			840042	847888	3
	Ag	107	25.547	ug/L	0.663	2	32	282497	0
	Cd	111	24.918	ug/L	0.418	1	72	105285	1
	Cd	114	25.619	ug/L	0.982	3	44	268731	1
	Sb	121	24.600	ug/L	0.788	3	346	320095	0
	Sb	123	24.657	ug/L	0.624	2	257	243661	0
	Ba	135	25.300	ug/L	0.914	3	17	96423	1
	Ba	137	25.128	ug/L	0.827	3	19	165650	0
>	Tb	159		ug/L			1001666	1006924	1
	Tl	205	25.371	ug/L	0.352	1	206	800443	0
	Pb	208	26.061	ug/L	0.532	2	157	1050704	0
	Bi	209		ug/L			2293546	2350107	0
	Th	232	24.216	ug/L	0.405	1	1512	939302	1
	U	238	24.549	ug/L	0.439	1	29	1020526	0

VR33 : 00438

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 20:37:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	735800	1
[	Be	9	0.122	ug/L	0.007	5	8	326	6
	C	13		ug/L			63994	83902	3
	Cl	37		ug/L			3532807	3990547	2
[>	Sc	45		ug/L			674505	883823	0
[	V	51	5.656	ug/L	0.060	1	6013	106865	0
[	V-1	51	5.670	ug/L	0.094	1	387	100542	1
[	Cr	52	5.369	ug/L	0.058	1	17778	104489	1
[	Cr	53	5.419	ug/L	0.128	2	210	9785	2
[	Mn	55	156.655	ug/L	4.759	3	314	3260523	2
[	Co	59	1.551	ug/L	0.046	2	73	24840	2
[>	Ge	72		ug/L			426798	477176	1
[	Ni	60	4.030	ug/L	0.070	1	26	12010	1
[	Ni	62	4.490	ug/L	0.206	4	48	1954	4
[	Cu	63	5.657	ug/L	0.216	3	88	37866	3
[	Cu	65	5.877	ug/L	0.048	0	42	17673	1
[	Zn	66	70.843	ug/L	0.842	1	141	123661	2
[	Zn	67	65.405	ug/L	0.518	0	21	19264	1
[	Zn	68	68.816	ug/L	0.548	0	144	86956	2
[	As	75	2.450	ug/L	0.021	0	220	4201	1
[	As-1	75	2.451	ug/L	0.067	2	9153	14200	0
[	Se	82	0.068	ug/L	0.041	60	-1	9	72
[	Se	78	0.129	ug/L	0.268	207	9315	10472	0
[	Mo	98	0.071	ug/L	0.005	6	35	337	5
	Y	89		ug/L			271155	330213	2
	Kr	83		ug/L			529	610	2
[>	In	115		ug/L			840042	862502	0
[	Ag	107	0.041	ug/L	0.003	8	32	499	8
[	Cd	111	1.187	ug/L	0.010	0	72	5174	0
[	Cd	114	1.170	ug/L	0.023	1	44	12534	1
[	Sb	121	0.052	ug/L	0.005	9	346	1041	6
[	Sb	123	0.053	ug/L	0.006	11	257	795	8
[	Ba	135	42.823	ug/L	0.143	0	17	166119	0
[	Ba	137	42.666	ug/L	0.426	0	19	286280	0
[>	Tb	159		ug/L			1001666	1028392	0
[	Tl	205	0.066	ug/L	0.005	8	206	2323	7
[	Pb	208	45.600	ug/L	0.143	0	157	1877796	0
[	Bi	209		ug/L			2293546	2387220	0
[	Th	232	1.440	ug/L	0.097	6	1512	58493	6
[	U	238	0.161	ug/L	0.001	0	29	6854	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:41:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	738986	0
	Be	9	0.564	ug/L	0.016	2	8	1477	2
	C	13		ug/L			63994	118129	1
	Cl	37		ug/L			3532807	4140354	0
>	Sc	45		ug/L			674505	939596	2
	V	51	26.592	ug/L	0.159	0	6013	503161	2
	V-1	51	26.502	ug/L	0.297	1	387	497647	2
	Cr	52	26.122	ug/L	0.726	2	17778	444626	2
	Cr	53	25.844	ug/L	1.113	4	210	48479	2
	Mn	55	741.705	ug/L	24.708	3	314	16403162	0
	Co	59	7.273	ug/L	0.174	2	73	123454	0
>	Ge	72		ug/L			426798	469465	0
	Ni	60	20.550	ug/L	0.447	2	26	60143	1
	Ni	62	21.943	ug/L	0.319	1	48	9190	0
	Cu	63	27.876	ug/L	0.267	0	88	183250	1
	Cu	65	28.151	ug/L	0.606	2	42	83105	1
	Zn	66	336.332	ug/L	4.992	1	141	576950	1
	Zn	67	315.347	ug/L	2.896	0	21	91298	1
	Zn	68	331.929	ug/L	4.743	1	144	412004	1
	As	75	12.008	ug/L	0.041	0	220	19311	0
	As-1	75	12.061	ug/L	0.099	0	9153	29280	0
	Se	82	0.130	ug/L	0.013	10	-1	20	12
	Se	78	0.777	ug/L	0.368	47	9315	10594	0
	Mo	98	0.314	ug/L	0.006	1	35	1340	1
	Y	89		ug/L			271155	436121	2
	Kr	83		ug/L			529	767	4
>	In	115		ug/L			840042	877396	2
	Ag	107	0.191	ug/L	0.009	4	32	2219	2
	Cd	111	5.582	ug/L	0.140	2	72	24463	0
	Cd	114	5.564	ug/L	0.126	2	44	60452	0
	Sb	121	0.234	ug/L	0.008	3	346	3507	1
	Sb	123	0.230	ug/L	0.008	3	257	2617	0
	Ba	135	208.864	ug/L	5.414	2	17	823842	0
	Ba	137	209.613	ug/L	5.250	2	19	1430271	1
>	Tb	159		ug/L			1001666	1042447	1
	Tl	205	0.272	ug/L	0.009	3	206	9112	2
	Pb	208	236.179	ug/L	2.432	1	157	9857384	0
	Bi	209		ug/L			2293546	2263424	1
	Th	232	5.873	ug/L	0.028	0	1512	237073	1
	U	238	0.774	ug/L	0.007	0	29	33342	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:45:34

Be

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	726293	3
	Be	9	0.676	ug/L	0.021	3	8	1737	2
	C	13		ug/L			63994	99225	2
	Cl	37		ug/L			3532807	4090838	1
>	Sc	45		ug/L			674505	965512	3
	V	51	25.064	ug/L	0.659	2	6013	487509	0
	V-1	51	24.877	ug/L	0.771	3	387	479763	0
	Cr	52	19.775	ug/L	0.289	1	17778	352010	1
	Cr	53	19.314	ug/L	0.660	3	210	37299	0
	Mn	55	742.463	ug/L	29.132	3	314	16870218	2
	Co	59	8.362	ug/L	0.429	5	73	145730	1
>	Ge	72		ug/L			426798	468656	1
	Ni	60	23.359	ug/L	0.067	0	26	68250	1
	Ni	62	24.844	ug/L	0.488	1	48	10379	1
	Cu	63	25.536	ug/L	0.298	1	88	167571	1
	Cu	65	25.376	ug/L	0.335	1	42	74803	2
	Zn	66	197.672	ug/L	1.961	0	141	338561	0
	Zn	67	193.138	ug/L	2.678	1	21	55822	0
	Zn	68	200.172	ug/L	2.629	1	144	248104	1
	As	75	12.382	ug/L	0.145	1	220	19869	1
	As-1	75	12.411	ug/L	0.117	0	9153	29787	1
	Se	82	-0.138	ug/L	0.066	47	-1	-26	44
	Se	78	0.672	ug/L	0.161	23	9315	10529	1
	Mo	98	0.416	ug/L	0.006	1	35	1761	2
	Y	89		ug/L			271155	450609	0
	Kr	83		ug/L			529	900	2
>	In	115		ug/L			840042	852865	0
	Ag	107	0.208	ug/L	0.010	4	32	2344	4
	Cd	111	2.939	ug/L	0.046	1	72	12561	2
	Cd	114	2.775	ug/L	0.011	0	44	29337	0
	Sb	121	0.117	ug/L	0.002	1	346	1876	0
	Sb	123	0.113	ug/L	0.003	2	257	1384	2
	Ba	135	182.550	ug/L	0.743	0	17	700184	0
	Ba	137	183.726	ug/L	1.511	0	19	1218962	0
>	Tb	159		ug/L			1001666	1032169	2
	Tl	205	0.210	ug/L	0.005	2	206	6997	1
	Pb	208	112.507	ug/L	2.384	2	157	4648486	0
	Bi	209		ug/L			2293546	2243014	2
	Th	232	7.213	ug/L	0.156	2	1512	287833	0
	U	238	1.043	ug/L	0.033	3	29	44468	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 B SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 20:49:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			681751	723072	0
Be	9	0.131	ug/L	0.006	4	8	342	4
C	13		ug/L			63994	83887	3
Cl	37		ug/L			3532807	4024481	0
Sc	45		ug/L			674505	915312	0
V	51	5.769	ug/L	0.076	1	6013	112716	1
V-1	51	5.701	ug/L	0.047	0	387	104704	1
Cr	52	10.144	ug/L	0.230	2	17778	182968	1
Cr	53	9.811	ug/L	0.293	2	210	18113	2
Mn	55	222.412	ug/L	6.445	2	314	4793765	2
Co	59	1.712	ug/L	0.062	3	73	28384	2
Ge	72		ug/L			426798	482838	1
Ni	60	7.390	ug/L	0.080	1	26	22263	0
Ni	62	7.758	ug/L	0.209	2	48	3376	2
Cu	63	5.393	ug/L	0.062	1	88	36537	0
Cu	65	5.407	ug/L	0.115	2	42	16453	1
Zn	66	56.971	ug/L	1.257	2	141	100629	0
Zn	67	55.242	ug/L	0.761	1	21	16466	0
Zn	68	58.195	ug/L	1.644	2	144	74407	1
As	75	3.049	ug/L	0.079	2	220	5228	1
As-1	75	3.085	ug/L	0.197	6	9153	15406	1
Se	82	0.006	ug/L	0.119	1972	-1	-1	1724
Se	78	0.178	ug/L	0.478	268	9315	10619	1
Mo	98	0.076	ug/L	0.006	7	35	365	6
Y	89		ug/L			271155	333122	1
Kr	83		ug/L			529	605	6
In	115		ug/L			840042	864943	0
Ag	107	0.056	ug/L	0.001	2	32	660	2
Cd	111	1.133	ug/L	0.019	1	72	4957	2
Cd	114	1.087	ug/L	0.022	1	44	11686	1
Sb	121	0.006	ug/L	0.002	38	346	432	6
Sb	123	0.005	ug/L	0.002	50	257	313	7
Ba	135	74.481	ug/L	1.206	1	17	289715	0
Ba	137	73.912	ug/L	0.511	0	19	497338	0
Tb	159		ug/L			1001666	1013700	0
Tl	205	0.054	ug/L	0.002	3	206	1939	4
Pb	208	60.005	ug/L	0.361	0	157	2435677	0
Bi	209		ug/L			2293546	2368962	0
Th	232	0.871	ug/L	0.005	0	1512	35496	0
U	238	0.220	ug/L	0.002	1	29	9247	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:53:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	727681	0
[	Be	9	0.644	ug/L	0.014	2	8	1660	2
	C	13		ug/L			63994	103642	1
	Cl	37		ug/L			3532807	4016937	2
[>	Sc	45		ug/L			674505	965503	2
[	V	51	27.443	ug/L	1.107	4	6013	532901	1
[	V-1	51	27.543	ug/L	1.061	3	387	531116	1
[	Cr	52	48.688	ug/L	1.593	3	17778	829281	1
[	Cr	53	48.451	ug/L	1.467	3	210	93137	0
[	Mn	55	1026.983	ug/L	32.793	3	314	23338362	0
[	Co	59	8.112	ug/L	0.243	2	73	141469	1
[>	Ge	72		ug/L			426798	465034	1
[	Ni	60	37.579	ug/L	0.376	1	26	108925	0
[	Ni	62	39.870	ug/L	1.987	4	48	16492	3
[	Cu	63	26.938	ug/L	0.173	0	88	175397	1
[	Cu	65	27.721	ug/L	0.554	1	42	81066	1
[	Zn	66	278.387	ug/L	1.055	0	141	473090	1
[	Zn	67	276.172	ug/L	5.802	2	21	79189	0
[	Zn	68	290.045	ug/L	3.437	1	144	356661	2
[	As	75	15.447	ug/L	0.098	0	220	24536	0
[	As-1	75	15.531	ug/L	0.192	1	9153	34478	0
[	Se	82	-0.072	ug/L	0.090	125	-1	-14	107
[	Se	78	0.940	ug/L	0.289	30	9315	10566	0
[	Mo	98	0.393	ug/L	0.027	6	35	1651	6
	Y	89		ug/L			271155	415913	1
	Kr	83		ug/L			529	879	5
[>	In	115		ug/L			840042	871864	0
[	Ag	107	0.275	ug/L	0.009	3	32	3158	3
[	Cd	111	5.362	ug/L	0.103	1	72	23363	1
[	Cd	114	5.282	ug/L	0.045	0	44	57052	0
[	Sb	121	0.102	ug/L	0.002	1	346	1719	0
[	Sb	123	0.099	ug/L	0.005	5	257	1273	4
[	Ba	135	371.434	ug/L	2.971	0	17	1456355	0
[	Ba	137	389.887	ug/L	3.612	0	19	2644365	0
[>	Tb	159		ug/L			1001666	1026566	1
[	Tl	205	0.284	ug/L	0.006	1	206	9358	0
[	Pb	208	311.329	ug/L	6.252	2	157	12793948	0
[	Bi	209		ug/L			2293546	2256326	0
[	Th	232	4.394	ug/L	0.100	2	1512	175004	0
[	U	238	1.087	ug/L	0.019	1	29	46115	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 20:57:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	715738	2
	Be	9	0.518	ug/L	0.016	3	8	1313	2
	C	13		ug/L			63994	104082	2
	Cl	37		ug/L			3532807	3986361	2
>	Sc	45		ug/L			674505	922984	2
	V	51	18.652	ug/L	0.599	3	6013	348990	1
	V-1	51	18.493	ug/L	0.588	3	387	341158	1
	Cr	52	13.368	ug/L	0.406	3	17778	235362	1
	Cr	53	12.995	ug/L	0.500	3	210	24091	2
	Mn	55	520.649	ug/L	15.552	2	314	11312971	1
	Co	59	5.599	ug/L	0.161	2	73	93397	2
>	Ge	72		ug/L			426798	463377	1
	Ni	60	15.931	ug/L	0.187	1	26	46026	0
	Ni	62	17.529	ug/L	0.520	2	48	7255	2
	Cu	63	19.386	ug/L	0.196	1	88	125805	1
	Cu	65	19.222	ug/L	0.308	1	42	56023	0
	Zn	66	209.484	ug/L	3.485	1	141	354722	0
	Zn	67	196.021	ug/L	7.379	3	21	56006	2
	Zn	68	206.541	ug/L	4.506	2	144	253058	0
	As	75	13.643	ug/L	0.203	1	220	21619	0
	As-1	75	13.826	ug/L	0.240	1	9153	31673	0
	Se	82	0.010	ug/L	0.015	154	-1	0	777
	Se	78	1.104	ug/L	0.255	23	9315	10601	0
	Mo	98	0.253	ug/L	0.010	4	35	1072	3
	Y	89		ug/L			271155	404003	1
	Kr	83		ug/L			529	736	2
>	In	115		ug/L			840042	868323	1
	Ag	107	0.155	ug/L	0.009	5	32	1793	3
	Cd	111	3.790	ug/L	0.087	2	72	16463	0
	Cd	114	3.718	ug/L	0.101	2	44	39994	0
	Sb	121	0.127	ug/L	0.007	5	346	2050	2
	Sb	123	0.127	ug/L	0.006	4	257	1550	2
	Ba	135	167.186	ug/L	3.714	2	17	652713	0
	Ba	137	166.342	ug/L	1.711	1	19	1123515	0
>	Tb	159		ug/L			1001666	1019285	2
	Tl	205	0.179	ug/L	0.007	3	206	5922	1
	Pb	208	139.735	ug/L	4.346	3	157	5700469	1
	Bi	209		ug/L			2293546	2279217	1
	Th	232	4.972	ug/L	0.119	2	1512	196384	0
	U	238	0.820	ug/L	0.030	3	29	34528	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 D SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 21:03:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	718156	1
	Be	9	0.110	ug/L	0.005	4	8	287	4
	C	13		ug/L			63994	81180	2
	Cl	37		ug/L			3532807	3986722	2
>	Sc	45		ug/L			674505	893752	0
	V	51	5.010	ug/L	0.097	1	6013	96633	1
	V-1	51	4.990	ug/L	0.056	1	387	89552	1
	Cr	52	5.833	ug/L	0.189	3	17778	112739	2
	Cr	53	5.746	ug/L	0.058	1	210	10475	0
	Mn	55	147.552	ug/L	2.864	1	314	3105799	1
	Co	59	1.598	ug/L	0.006	0	73	25885	0
>	Ge	72		ug/L			426798	475688	1
	Ni	60	4.961	ug/L	0.087	1	26	14732	0
	Ni	62	5.210	ug/L	0.061	1	48	2251	0
	Cu	63	4.979	ug/L	0.053	1	88	33242	0
	Cu	65	5.006	ug/L	0.047	0	42	15013	1
	Zn	66	81.490	ug/L	2.061	2	141	141738	1
	Zn	67	75.906	ug/L	1.825	2	21	22280	1
	Zn	68	80.736	ug/L	2.678	3	144	101637	2
	As	75	3.684	ug/L	0.031	0	220	6173	1
	As-1	75	3.861	ug/L	0.059	1	9153	16433	1
	Se	82	0.019	ug/L	0.097	515	-1	1	1283
	Se	78	0.744	ug/L	0.118	15	9315	10720	0
	Mo	98	0.063	ug/L	0.002	3	35	303	3
	Y	89		ug/L			271155	324083	0
	Kr	83		ug/L			529	622	5
>	In	115		ug/L			840042	870532	1
	Ag	107	0.069	ug/L	0.004	5	32	815	4
	Cd	111	1.620	ug/L	0.041	2	72	7097	1
	Cd	114	1.609	ug/L	0.006	0	44	17386	0
	Sb	121	0.024	ug/L	0.001	5	346	684	3
	Sb	123	0.026	ug/L	0.003	11	257	528	4
	Ba	135	37.512	ug/L	0.427	1	17	146870	1
	Ba	137	37.436	ug/L	0.386	1	19	253531	0
>	Tb	159		ug/L			1001666	1025397	0
	Tl	205	0.068	ug/L	0.002	2	206	2409	2
	Pb	208	76.718	ug/L	0.497	0	157	3149930	0
	Bi	209		ug/L			2293546	2361014	0
	Th	232	1.017	ug/L	0.013	1	1512	41649	1
	U	238	0.098	ug/L	0.002	1	29	4170	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 21:07:15

Be

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	731626	0
[	Be	9	0.560	ug/L	0.026	4	8	1452	4
	C	13		ug/L			63994	105991	3
	Cl	37		ug/L			3532807	4144019	0
[>	Sc	45		ug/L			674505	940529	1
[	V	51	25.020	ug/L	0.472	1	6013	474313	1
[	V-1	51	24.903	ug/L	0.370	1	387	468105	1
[	Cr	52	29.240	ug/L	0.616	2	17778	495260	1
[	Cr	53	28.752	ug/L	0.544	1	210	53979	0
[	Mn	55	739.840	ug/L	25.630	3	314	16383597	2
[	Co	59	8.071	ug/L	0.216	2	73	137152	1
[>	Ge	72		ug/L			426798	477029	0
[	Ni	60	25.944	ug/L	0.485	1	26	77163	2
[	Ni	62	27.414	ug/L	0.388	1	48	11652	0
[	Cu	63	24.594	ug/L	0.286	1	88	164274	1
[	Cu	65	25.458	ug/L	0.483	1	42	76371	1
[	Zn	66	403.816	ug/L	6.337	1	141	703817	0
[	Zn	67	371.921	ug/L	7.532	2	21	109396	1
[	Zn	68	398.923	ug/L	6.863	1	144	503077	1
[	As	75	18.497	ug/L	0.395	2	220	30088	1
[	As-1	75	18.478	ug/L	0.363	1	9153	40136	0
[	Se	82	0.126	ug/L	0.085	67	-1	20	74
[	Se	78	0.636	ug/L	0.057	9	9315	10701	0
[	Mo	98	0.366	ug/L	0.009	2	35	1583	3
	Y	89		ug/L			271155	390078	1
	Kr	83		ug/L			529	804	0
[>	In	115		ug/L			840042	904693	0
[	Ag	107	0.332	ug/L	0.006	1	32	3955	1
[	Cd	111	7.770	ug/L	0.051	0	72	35092	0
[	Cd	114	7.615	ug/L	0.099	1	44	85331	0
[	Sb	121	0.203	ug/L	0.009	4	346	3184	3
[	Sb	123	0.205	ug/L	0.005	2	257	2432	1
[	Ba	135	187.747	ug/L	3.378	1	17	763867	1
[	Ba	137	187.541	ug/L	2.966	1	19	1319811	0
[>	Tb	159		ug/L			1001666	1013771	0
[	Tl	205	0.370	ug/L	0.006	1	206	11951	1
[	Pb	208	426.103	ug/L	8.534	2	157	17294994	1
[	Bi	209		ug/L			2293546	2275610	0
[	Th	232	5.605	ug/L	0.092	1	1512	220067	1
[	U	238	0.519	ug/L	0.003	0	29	21749	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 21:11:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	714649	0
	Be	9	52.918	ug/L	0.966	1	8	133139	1
	C	13		ug/L			63994	76191	1
	Cl	37		ug/L			3532807	4113148	1
>	Sc	45		ug/L			674505	862217	1
	V	51	47.578	ug/L	0.851	1	6013	819872	1
	V-1	51	47.412	ug/L	0.853	1	387	816509	0
	Cr	52	46.700	ug/L	0.655	1	17778	711593	1
	Cr	53	46.190	ug/L	0.644	1	210	79334	0
	Mn	55	45.814	ug/L	0.619	1	314	930541	0
	Co	59	44.574	ug/L	0.848	1	73	694037	1
>	Ge	72		ug/L			426798	471651	1
	Ni	60	51.045	ug/L	0.285	0	26	150072	1
	Ni	62	50.130	ug/L	0.665	1	48	21023	0
	Cu	63	50.001	ug/L	0.591	1	88	330094	0
	Cu	65	51.352	ug/L	0.627	1	42	152294	2
	Zn	66	49.998	ug/L	0.773	1	141	86303	2
	Zn	67	51.724	ug/L	0.847	1	21	15061	0
	Zn	68	50.277	ug/L	2.255	4	144	62809	3
	As	75	49.438	ug/L	0.315	0	220	79119	2
	As-1	75	49.783	ug/L	0.206	0	9153	89790	1
	Se	82	49.887	ug/L	0.270	0	-1	8728	0
	Se	78	51.083	ug/L	1.265	2	9315	33284	0
	Mo	98	48.123	ug/L	0.537	1	35	200413	0
	Y	89		ug/L			271155	295087	3
	Kr	83		ug/L			529	608	3
>	In	115		ug/L			840042	843880	0
	Ag	107	48.421	ug/L	1.479	3	32	533151	3
	Cd	111	49.684	ug/L	0.554	1	72	208922	0
	Cd	114	49.715	ug/L	0.954	1	44	519387	2
	Sb	121	49.032	ug/L	0.406	0	346	635049	0
	Sb	123	48.522	ug/L	0.292	0	257	477224	0
	Ba	135	48.647	ug/L	0.351	0	17	184632	0
	Ba	137	48.895	ug/L	0.486	0	19	320993	0
>	Tb	159		ug/L			1001666	998596	0
	Tl	205	48.471	ug/L	0.242	0	206	1516580	0
	Pb	208	49.768	ug/L	0.231	0	157	1990062	0
	Bi	209		ug/L			2293546	2250203	0
	Th	232	47.644	ug/L	0.410	0	1512	1831451	1
	U	238	51.101	ug/L	3.397	6	29	2107112	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 21:18:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	709696	1
	Be	9	0.002	ug/L	0.002	77	8	14	31
	C	13		ug/L			63994	75835	0
	Cl	37		ug/L			3532807	3944174	1
>	Sc	45		ug/L			674505	840504	0
	V	51	-0.023	ug/L	0.004	17	6013	7112	1
	V-1	51	-0.024	ug/L	0.001	2	387	83	12
	Cr	52	-0.076	ug/L	0.006	8	17778	21066	1
	Cr	53	-0.077	ug/L	0.006	8	210	132	8
	Mn	55	0.006	ug/L	0.004	64	314	507	15
	Co	59	-0.000	ug/L	0.001	185	73	84	14
>	Ge	72		ug/L			426798	456965	1
	Ni	60	0.000	ug/L	0.001	412	26	28	11
	Ni	62	-0.026	ug/L	0.008	31	48	41	8
	Cu	63	-0.001	ug/L	0.002	259	88	89	15
	Cu	65	-0.003	ug/L	0.002	63	42	37	13
	Zn	66	-0.002	ug/L	0.005	230	141	148	3
	Zn	67	0.016	ug/L	0.017	109	21	27	18
	Zn	68	0.002	ug/L	0.011	455	144	157	7
	As	75	0.003	ug/L	0.011	347	220	240	5
	As-1	75	0.375	ug/L	0.129	34	9153	10380	0
	Se	82	-0.028	ug/L	0.070	249	-1	-6	176
	Se	78	1.326	ug/L	0.437	32	9315	10550	0
	Mo	98	0.002	ug/L	0.002	126	35	45	17
	Y	89		ug/L			271155	288647	1
	Kr	83		ug/L			529	585	5
>	In	115		ug/L			840042	826844	1
	Ag	107	0.000	ug/L	0.001	206	32	37	26
	Cd	111	-0.001	ug/L	0.002	442	72	69	12
	Cd	114	-0.000	ug/L	0.000	2787	44	44	11
	Sb	121	0.030	ug/L	0.005	18	346	715	8
	Sb	123	0.029	ug/L	0.006	22	257	532	10
	Ba	135	0.001	ug/L	0.002	288	17	19	29
	Ba	137	0.003	ug/L	0.000	12	19	38	5
>	Tb	159		ug/L			1001666	970421	1
	Tl	205	-0.000	ug/L	0.002	47518	206	199	28
	Pb	208	0.005	ug/L	0.002	39	157	339	20
	Bi	209		ug/L			2293546	2301911	0
	Th	232	0.076	ug/L	0.006	8	1512	4288	4
	U	238	0.002	ug/L	0.001	44	29	97	30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.19.12 **Analyst:** MJJ **Page:** 1 **of** 8

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓-2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{62}Ni high; ^{67}Zn 120%
		LR200			
		LR300			
		B1			
		B2			
		B3			
		CCV2			
		CCB2			
		VR32 A-L	SWN	100	Ag
		A	↓	20	↓
		ADUP		↓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.19.12 **Analyst:** MJJ **Page:** 2 **of** 8

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR32 ASPK	SWN	20	Ag
		B			
		C			
		D			
		E			
		F			
		G			
		CCV3			
		CCB3			
		VR33 MB1	SWN	20	Ag
		MB1SPK			
		VR32 H			
		I			
		J			
		K			
		L		100	V Cr Co
		L		20	Ag
		VR33 C		100	V Cr Co
		C		20	Ag
		CCV4			
		CCB4			
		VR33 A-L	SWN	100	Ag
		A		20	
		ADUP			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.19.12 **Analyst:** MJJ **Page:** 3 **of** 8

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR33 ASPK	SWN	20 ✓	Ag
		B			
		D			
		E			
		F			
		G			
		H			
		CCV5			
		CCB5			
		VR34 A-L	SWN	500 ✓	Pb Zn
		A		100	
		ADUP		✓	
		ASPK		✓	STL
		B		20	Ag
		C			
		VR33 I			
		J			
		K			
		L			
		CCV6			
		CCB6			
		VR34 MB1	SWN	20	Ag
		MB1SPK		1 ✓	
		A-L		100 ✓	

AJL 24

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA Analysis Date: 11.19.12

M2 Mexico	Analyst MJT 11.20.12	Peer JT 11-21	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	L
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	VR36, VR37
Matrix Duplicates	✓	✓	VR36
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF VR36, VR37

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, November 19, 2012 12:04:58
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.1301
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4146.4	4146.431	47.579	1.1	Standard
	Mg	24.0	43116.5	43116.525	277.372	0.6	Standard
	In	114.9	86325.8	86325.763	322.961	0.4	Standard
	Pb	208.0	34073.0	34072.983	125.163	0.4	Standard
	U	238.1	62712.8	62712.771	575.428	0.9	Standard
[	CeO	155.9	2052.3	0.024	0.001	5.0	Standard
| >	Ce	139.9	84445.8	84445.846	289.352	0.3	Standard
[	Ce++	70.0	1159.2	0.014	0.001	3.9	Standard
	Bkgd	220.0	0.1	0.100	0.149	149.1	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1250.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

VR33 : 00453

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/19/2012 12:04:56 PM
End Time: 11/19/2012 12:07:32 PM

Daily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4146.43
Obtained Intensity (Mg 23.985): 43116.52
Obtained Intensity (In 114.904): 86325.76
Obtained Intensity (Pb 207.977): 34072.98
Obtained Intensity (U 238.05): 62712.77
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.024 (=2052.32 / 84445.85)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.014 (=1159.21 / 84445.85)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\DUALDET.swz

tart Time: 11/19/2012 11:27:55 AM
nd Time: 11/19/2012 11:30:48 AM

etector Voltages - [Passed]
Pulse Stage Voltage - [Passed] Optimum value(s): 1250
Analog Stage Voltage - [Passed] Optimum value(s): -1675
Pulse Stage Voltage (Fine-tune) - [Passed] Optimum value(s): 1250

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/19/2012 11:57:57 AM
End Time: 11/19/2012 12:00:10 PM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.704)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.709)

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/19/2012 12:00:20 PM
End Time: 11/19/2012 12:04:31 PM

AutoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.992; Intercept = -12.11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:46:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				923208	0
	Be	9		ug/L				23	24
	C	13		ug/L				82469	2
	Cl	37		ug/L				4833777	2
>	Sc	45		ug/L				1144296	0
	V	51		ug/L				9450	1
	V-1	51		ug/L				48	5
	Cr	52		ug/L				27897	1
	Cr	53		ug/L				145	4
	Mn	55		ug/L				487	5
	Co	59		ug/L				76	23
>	Ge	72		ug/L				608948	1
	Ni	60		ug/L				28	17
	Ni	62		ug/L				64	12
	Cu	63		ug/L				101	7
	Cu	65		ug/L				39	18
	Zn	66		ug/L				991	6
	Zn	67		ug/L				141	4
	Zn	68		ug/L				706	3
	As	75		ug/L				318	3
	As-1	75		ug/L				12623	0
	Se	82		ug/L				-10	161
	Se	78		ug/L				12864	0
	Mo	98		ug/L				28	23
	Y	89		ug/L				406158	1
	Kr	83		ug/L				794	5
>	In	115		ug/L				1093664	0
	Ag	107		ug/L				42	23
	Cd	111		ug/L				115	7
	Cd	114		ug/L				65	11
	Sb	121		ug/L				182	13
	Sb	123		ug/L				151	14
	Ba	135		ug/L				15	20
	Ba	137		ug/L				26	9
>	Tb	159		ug/L				1253683	0
	Tl	205		ug/L				128	15
	Pb	208		ug/L				347	1
	Bi	209		ug/L				2594753	0
	Th	232		ug/L				1408	3
	U	238		ug/L				31	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:50:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	916656	0
[	Be	9	0.200	ug/L	0.001	0	23	690	1
	C	13		ug/L			82469	86121	3
	Cl	37		ug/L			4833777	4879558	1
[>	Sc	45		ug/L			1144296	1138804	1
|	V	51	0.200	ug/L	0.006	3	9450	14094	1
|	V-1	51	0.200	ug/L	0.008	3	48	4585	2
|	Cr	52	0.500	ug/L	0.033	6	27897	37414	1
|	Cr	53	0.500	ug/L	0.032	6	145	1187	4
|	Mn	55	0.500	ug/L	0.004	0	487	13129	1
[	Co	59	0.200	ug/L	0.005	2	76	3875	1
[>	Ge	72		ug/L			608948	597664	0
|	Ni	60	0.500	ug/L	0.006	1	28	2114	0
|	Ni	62	0.500	ug/L	0.044	8	64	319	6
|	Cu	63	0.500	ug/L	0.006	1	101	4905	0
|	Cu	65	0.500	ug/L	0.008	1	39	2155	2
|	Zn	66	4.000	ug/L	0.089	2	991	10456	1
|	Zn	67	4.000	ug/L	0.066	1	141	1575	2
|	Zn	68	4.000	ug/L	0.075	1	706	7362	0
|	As	75	0.200	ug/L	0.007	3	318	808	1
|	As-1	75	0.200	ug/L	0.019	9	12623	12962	0
|	Se	82	0.500	ug/L	0.014	2	-10	140	2
|	Se	78	0.500	ug/L	0.036	7	12864	13072	0
[	Mo	98	0.200	ug/L	0.012	6	28	1200	6
	Y	89		ug/L			406158	409551	1
	Kr	83		ug/L			794	763	2
[>	In	115		ug/L			1093664	1090207	1
|	Ag	107	0.200	ug/L	0.002	1	42	3242	1
|	Cd	111	0.100	ug/L	0.007	7	115	698	6
|	Cd	114	0.100	ug/L	0.004	3	65	1460	3
|	Sb	121	0.200	ug/L	0.005	2	182	3279	1
|	Sb	123	0.200	ug/L	0.007	3	151	2451	1
|	Ba	135	0.500	ug/L	0.020	3	15	2381	3
[	Ba	137	0.500	ug/L	0.011	2	26	4228	1
[>	Tb	159		ug/L			1253683	1242355	1
|	Tl	205	0.200	ug/L	0.002	0	128	7365	1
|	Pb	208	0.100	ug/L	0.003	2	347	5270	1
|	Bi	209		ug/L			2594753	2571936	0
|	Th	232	0.200	ug/L	0.011	5	1408	8376	4
[	U	238	0.200	ug/L	0.005	2	31	9772	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:54:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	933022	1
[	Be	9	10.000	ug/L	0.156	1	23	33700	0
	C	13		ug/L			82469	90005	1
	Cl	37		ug/L			4833777	4848340	1
[>	Sc	45		ug/L			1144296	1185233	0
[	V	51	9.999	ug/L	0.146	1	9450	224847	1
[	V-1	51	10.000	ug/L	0.150	1	48	215611	1
[	Cr	52	9.998	ug/L	0.204	2	27897	216834	2
[	Cr	53	10.000	ug/L	0.052	0	145	21548	0
[	Mn	55	9.999	ug/L	0.119	1	487	255385	0
[	Co	59	10.000	ug/L	0.167	1	76	189731	1
[>	Ge	72		ug/L			608948	614297	2
[	Ni	60	9.999	ug/L	0.343	3	28	41277	2
[	Ni	62	10.002	ug/L	0.440	4	64	5796	1
[	Cu	63	9.998	ug/L	0.340	3	101	92665	0
[	Cu	65	9.999	ug/L	0.249	2	39	41708	0
[	Zn	66	9.957	ug/L	0.183	1	991	24632	0
[	Zn	67	10.065	ug/L	0.287	2	141	4011	1
[	Zn	68	9.966	ug/L	0.198	1	706	17432	0
[	As	75	9.999	ug/L	0.157	1	318	22230	1
[	As-1	75	9.998	ug/L	0.282	2	12623	33705	0
[	Se	82	9.996	ug/L	0.227	2	-10	2688	1
[	Se	78	9.986	ug/L	0.614	6	12864	18883	0
[	Mo	98	10.000	ug/L	0.238	2	28	59088	0
	Y	89		ug/L			406158	417433	0
	Kr	83		ug/L			794	783	2
[>	In	115		ug/L			1093664	1113587	1
[	Ag	107	10.000	ug/L	0.200	2	42	161065	0
[	Cd	111	10.000	ug/L	0.133	1	115	56991	0
[	Cd	114	10.000	ug/L	0.167	1	65	138401	0
[	Sb	121	10.000	ug/L	0.202	2	182	161865	0
[	Sb	123	10.000	ug/L	0.221	2	151	123040	0
[	Ba	135	10.000	ug/L	0.092	0	15	48834	1
[	Ba	137	10.000	ug/L	0.205	2	26	84620	0
[>	Tb	159		ug/L			1253683	1282920	1
[	Tl	205	10.000	ug/L	0.220	2	128	363752	0
[	Pb	208	10.000	ug/L	0.102	1	347	477727	0
[	Bi	209		ug/L			2594753	2636223	1
[	Th	232	10.001	ug/L	0.251	2	1408	447555	0
[	U	238	10.000	ug/L	0.082	0	31	495377	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 12:59:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	937495	2
	Be	9	19.889	ug/L	0.626	3	23	65838	0
	C	13		ug/L			82469	83760	1
	Cl	37		ug/L			4833777	5015006	1
>	Sc	45		ug/L			1144296	1203031	2
	V	51	19.927	ug/L	0.871	4	9450	438457	2
	V-1	51	19.937	ug/L	0.796	3	48	430653	2
	Cr	52	19.882	ug/L	0.726	3	27897	399736	1
	Cr	53	19.915	ug/L	0.482	2	145	42674	1
	Mn	55	19.903	ug/L	0.250	1	487	505631	0
	Co	59	19.922	ug/L	0.365	1	76	377606	1
>	Ge	72		ug/L			608948	619427	0
	Ni	60	19.872	ug/L	0.586	2	28	80662	2
	Ni	62	19.978	ug/L	0.244	1	64	11568	1
	Cu	63	19.942	ug/L	0.491	2	101	184224	1
	Cu	65	20.000	ug/L	0.326	1	39	84104	0
	Zn	66	19.915	ug/L	0.206	1	991	48000	1
	Zn	67	20.172	ug/L	0.803	3	141	8202	3
	Zn	68	19.995	ug/L	0.271	1	706	34526	0
	As	75	19.962	ug/L	0.565	2	318	44100	2
	As-1	75	19.960	ug/L	0.629	3	12623	54733	1
	Se	82	19.945	ug/L	0.211	1	-10	5362	0
	Se	78	19.937	ug/L	0.371	1	12864	24837	0
	Mo	98	19.937	ug/L	0.313	1	28	117336	2
	Y	89		ug/L			406158	415025	1
	Kr	83		ug/L			794	787	2
>	In	115		ug/L			1093664	1107288	0
	Ag	107	19.960	ug/L	0.354	1	42	317113	0
	Cd	111	19.974	ug/L	0.345	1	115	112498	0
	Cd	114	20.013	ug/L	0.131	0	65	276096	0
	Sb	121	19.987	ug/L	0.158	0	182	320751	0
	Sb	123	19.979	ug/L	0.469	2	151	243251	1
	Ba	135	19.995	ug/L	0.081	0	15	96982	0
	Ba	137	19.998	ug/L	0.357	1	26	168205	0
>	Tb	159		ug/L			1253683	1280440	0
	Tl	205	19.969	ug/L	0.161	0	128	720533	0
	Pb	208	19.963	ug/L	0.052	0	347	944606	0
	Bi	209		ug/L			2594753	2596363	0
	Th	232	20.056	ug/L	0.181	0	1408	904639	0
	U	238	20.006	ug/L	0.139	0	31	990473	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:03:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	911518	1
	Be	9	50.045	ug/L	2.119	4	23	161803	3
	C	13		ug/L			82469	83061	1
	Cl	37		ug/L			4833777	5004130	5
>	Sc	45		ug/L			1144296	1184686	0
	V	51	50.120	ug/L	0.361	0	9450	1084559	0
	V-1	51	50.086	ug/L	0.412	0	48	1074978	0
	Cr	52	49.887	ug/L	0.094	0	27897	934278	0
	Cr	53	49.773	ug/L	0.418	0	145	102509	0
	Mn	55	49.918	ug/L	0.896	1	487	1238108	1
	Co	59	49.943	ug/L	0.602	1	76	927044	1
>	Ge	72		ug/L			608948	607610	1
	Ni	60	49.876	ug/L	1.024	2	28	196115	1
	Ni	62	50.026	ug/L	1.149	2	64	28384	1
	Cu	63	49.887	ug/L	1.101	2	101	446839	0
	Cu	65	49.734	ug/L	1.230	2	39	199762	1
	Zn	66	49.933	ug/L	0.671	1	991	115798	0
	Zn	67	49.713	ug/L	1.031	2	141	19096	1
	Zn	68	49.986	ug/L	0.603	1	706	83500	2
	As	75	49.938	ug/L	1.770	3	318	107048	1
	As-1	75	50.045	ug/L	1.759	3	12623	116073	1
	Se	82	49.796	ug/L	1.538	3	-10	12880	1
	Se	78	50.169	ug/L	1.464	2	12864	42334	0
	Mo	98	49.962	ug/L	1.784	3	28	287164	1
	Y	89		ug/L			406158	412798	2
	Kr	83		ug/L			794	791	2
>	In	115		ug/L			1093664	1079743	1
	Ag	107	49.877	ug/L	2.008	4	42	763150	3
	Cd	111	49.824	ug/L	0.674	1	115	268740	0
	Cd	114	49.985	ug/L	1.102	2	65	671190	0
	Sb	121	49.988	ug/L	1.069	2	182	780941	0
	Sb	123	50.068	ug/L	0.954	1	151	598285	0
	Ba	135	50.121	ug/L	1.315	2	15	239860	1
	Ba	137	50.110	ug/L	0.856	1	26	415503	0
>	Tb	159		ug/L			1253683	1247857	0
	Tl	205	49.987	ug/L	0.044	0	128	1755322	0
	Pb	208	50.066	ug/L	0.824	1	347	2323392	0
	Bi	209		ug/L			2594753	2495502	0
	Th	232	50.402	ug/L	0.938	1	1408	2306099	1
	U	238	50.285	ug/L	0.896	1	31	2497066	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:09:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	891313 ✓	0
[	Be	9	99.947	ug/L	0.244	0	23	315511	1
	C	13		ug/L			82469	84738	3
	Cl	37		ug/L			4833777	4953154	4
[>	Sc	45		ug/L			1144296	1167146 ✓	1
[	V	51	100.712	ug/L	0.245	0	9450	2189113	1
[	V-1	51	100.754	ug/L	0.568	0	48	2185272	1
[	Cr	52	100.321	ug/L	1.200	1	27897	1841514	1
[	Cr	53	100.463	ug/L	1.519	1	145	206862	0
[	Mn	55	100.840	ug/L	2.009	1	487	2534283	1
[	Co	59	100.319	ug/L	0.762	0	76	1854091	0
[>	Ge	72		ug/L			608948	596637 ✓	0
[	Ni	60	99.944	ug/L	0.886	0	28	385176	0
[	Ni	62	99.733	ug/L	2.716	2	64	55023	2
[	Cu	63	99.895	ug/L	1.732	1	101	875624	1
[	Cu	65	99.356	ug/L	0.798	0	39	383683	0
[	Zn	66	99.899	ug/L	0.507	0	991	225790	0
[	Zn	67	100.202	ug/L	3.382	3	141	37918	3
[	Zn	68	99.390	ug/L	0.979	0	706	159140	0
[	As	75	99.775	ug/L	0.281	0	318	208226	0
[	As-1	75	100.010	ug/L	0.095	0	12623	215568	0
[	Se	82	99.169	ug/L	0.106	0	-10	24527	0
[	Se	78	99.962	ug/L	0.786	0	12864	70265	1
[	Mo	98	99.697	ug/L	0.955	0	28	557227	0
	Y	89		ug/L			406158	413954	1
	Kr	83		ug/L			794	827	5
[>	In	115		ug/L			1093664	1074124 ✓	0
[	Ag	107	99.437	ug/L	0.075	0	42	1485876	0
[	Cd	111	99.398	ug/L	0.423	0	115	522801	0
[	Cd	114	99.030	ug/L	1.494	1	65	1281577	0
[	Sb	121	99.740	ug/L	0.719	0	182	1536871	0
[	Sb	123	99.505	ug/L	0.866	0	151	1163696	0
[	Ba	135	99.804	ug/L	1.250	1	15	472155	0
[	Ba	137	99.870	ug/L	0.938	0	26	820330	0
[>	Tb	159		ug/L			1253683	1263879 ✓	0
[	Tl	205	99.748	ug/L	0.778	0	128	3517940	0
[	Pb	208	99.382	ug/L	1.047	1	347	4576949	0
[	Bi	209		ug/L			2594753	2422857	0
[	Th	232	99.471	ug/L	0.611	0	1408	4528886	0
[	U	238	99.102	ug/L	1.179	1	31	4840021	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:16:44
Number of Replicates: 3
Method File: C:\NexION\Data\Method\200.8nomin.mth
Tuning File: C:\NexION\Data\MassCal\Default.tun
Optimization File: C:\NexION\Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	904911	0
	Be	9	0.003	ug/L	0.006	212	23	31	56
	C	13		ug/L			82469	82087	1
	Cl	37		ug/L			4833777	4891658	5
>	Sc	45		ug/L			1144296	1137530	2
	V	51	0.012	ug/L	0.012	99	9450	9645	0
	V-1	51	0.003	ug/L	0.004	131	48	116	77
	Cr	52	0.033	ug/L	0.043	131	27897	28298	0
	Cr	53	0.003	ug/L	0.004	143	145	150	2
	Mn	55	0.003	ug/L	0.005	159	487	554	20
	Co	59	0.002	ug/L	0.004	207	76	109	64
>	Ge	72		ug/L			608948	611501	1
	Ni	60	0.003	ug/L	0.002	73	28	40	22
	Ni	62	0.408	ug/L	0.171	41	64	295	34
	Cu	63	0.035	ug/L	0.011	31	101	420	25
	Cu	65	0.005	ug/L	0.001	30	39	59	11
	Zn	66	-0.000	ug/L	0.020	879230	991	994	3
	Zn	67	0.000	ug/L	0.016	6982	141	142	4
	Zn	68	0.013	ug/L	0.042	319	706	730	7
	As	75	-0.015	ug/L	0.008	50	318	287	4
	As-1	75	-0.100	ug/L	0.177	176	12623	12464	1
	Se	82	-0.021	ug/L	0.044	205	-10	-15	70
	Se	78	-0.352	ug/L	0.605	171	12864	12706	1
	Mo	98	0.020	ug/L	0.010	50	28	142	42
	Y	89		ug/L			406158	400033	1
	Kr	83		ug/L			794	773	4
>	In	115		ug/L			1093664	1082037	1
	Ag	107	0.006	ug/L	0.007	125	42	125	82
	Cd	111	0.005	ug/L	0.007	142	115	141	26
	Cd	114	0.004	ug/L	0.006	147	65	114	62
	Sb	121	0.105	ug/L	0.005	5	182	1816	5
	Sb	123	0.101	ug/L	0.003	3	151	1341	1
	Ba	135	0.008	ug/L	0.014	182	15	50	128
	Ba	137	0.008	ug/L	0.013	153	26	93	110
>	Tb	159		ug/L			1253683	1223630	0
	Tl	205	0.019	ug/L	0.007	35	128	769	29
	Pb	208	0.006	ug/L	0.009	152	347	598	65
	Bi	209		ug/L			2594753	2527112	0
	Th	232	0.139	ug/L	0.003	2	1408	7520	1
	U	238	0.007	ug/L	0.006	84	31	365	77

Sample Information

Sample Date/Time: Monday, November 19, 2012 13:16:44
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.019	0.20	10	20	50	100
V-1	51	**0.9999**	0.019	0.20	10	20	50	100
Cr	52	**1.0000**	0.015	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9999**	0.022	0.50	10	20	50	100
Co	59	**1.0000**	0.016	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.015	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9998**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.028	0.20	10	20	50	100
Pb	208	**0.9999**	0.036	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.036	0.20	10	20	50	100
U	238	**0.9998**	0.039	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:23:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	903111	0
	Be	9	51.117	ug/L	0.622	1	23	163510	1
	C	13		ug/L			82469	82989	2
	Cl	37		ug/L			4833777	4812852	2
>	Sc	45		ug/L			1144296	1175181	1
	V	51	51.435	ug/L	1.217	2	9450	1130276	1
	V-1	51	51.240	ug/L	0.749	1	48	1118939	0
	Cr	52	51.489	ug/L	1.729	3	27897	965406	2
	Cr	53	50.829	ug/L	0.599	1	145	105465	1
	Mn	55	50.716	ug/L	1.041	2	487	1283580	1
	Co	59	50.784	ug/L	0.616	1	76	945168	1
>	Ge	72		ug/L			608948	598084	1
	Ni	60	52.750	ug/L	1.733	3	28	203725	1
	Ni	62	51.489	ug/L	1.734	3	64	28496	1
	Cu	63	52.429	ug/L	0.666	1	101	460669	0
	Cu	65	52.275	ug/L	1.631	3	39	202300	1
	Zn	66	51.456	ug/L	1.176	2	991	117026	1
	Zn	67	51.109	ug/L	1.152	2	141	19451	2
	Zn	68	50.855	ug/L	1.384	2	706	81948	2
	As	75	53.304	ug/L	0.858	1	318	111639	1
	As-1	75	52.475	ug/L	0.684	1	12623	119257	0
	Se	82	80.661	ug/L	2.056	2	-10	19991	1
	Se	78	80.195	ug/L	1.630	2	12864	58993	0
	Mo	98	49.736	ug/L	0.966	1	28	278618	0
	Y	89		ug/L			406158	403288	2
	Kr	83		ug/L			794	795	5
>	In	115		ug/L			1093664	1073418	0
	Ag	107	51.463	ug/L	0.683	1	42	768584	2
	Cd	111	50.824	ug/L	0.277	0	115	267206	1
	Cd	114	51.560	ug/L	0.734	1	65	666824	0
	Sb	121	50.588	ug/L	0.440	0	182	779044	0
	Sb	123	50.247	ug/L	0.456	0	151	587292	0
	Ba	135	51.509	ug/L	0.384	0	15	243525	0
	Ba	137	51.210	ug/L	0.517	1	26	420376	0
>	Tb	159		ug/L			1253683	1249512	0
	Tl	205	50.951	ug/L	0.609	1	128	1776517	0
	Pb	208	51.578	ug/L	0.119	0	347	2348564	0
	Bi	209		ug/L			2594753	2479132	0
	Th	232	53.164	ug/L	0.470	0	1408	2393602	0
	U	238	52.927	ug/L	0.307	0	31	2555643	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:30:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	871631 ✓	0
	Be	9	-0.001	ug/L	0.001	61	23	18	13
	C	13		ug/L			82469	80983	1
	Cl	37		ug/L			4833777	4967047	4
>	Sc	45		ug/L			1144296	1115915 ✓	0
	V	51	0.018	ug/L	0.011	61	9450	9587	1
	V-1	51	0.001	ug/L	0.000	68	48	60	14
	Cr	52	0.063	ug/L	0.048	75	27897	28286	2
	Cr	53	0.004	ug/L	0.013	348	145	149	17
	Mn	55	-0.001	ug/L	0.001	38	487	443	3
	Co	59	-0.000	ug/L	0.001	312	76	69	20
>	Ge	72		ug/L			608948	593285 ✓	1
	Ni	60	-0.000	ug/L	0.001	211	28	26	9
	Ni	62	0.036	ug/L	0.035	97	64	82	23
	Cu	63	0.004	ug/L	0.002	50	101	130	11
	Cu	65	0.001	ug/L	0.001	71	39	43	8
	Zn	66	-0.226	ug/L	0.016	7	991	459	6
	Zn	67	-0.174	ug/L	0.031	17	141	73	16
	Zn	68	-0.187	ug/L	0.007	3	706	391	1
	As	75	-0.021	ug/L	0.010	48	318	265	7
	As-1	75	0.025	ug/L	0.082	325	12623	12348	0
	Se	82	0.022	ug/L	0.009	42	-10	-4	48
	Se	78	0.147	ug/L	0.287	194	12864	12617	0
	Mo	98	0.007	ug/L	0.001	18	28	67	9
	Y	89		ug/L			406158	389844	0
	Kr	83		ug/L			794	743	2
>	In	115		ug/L			1093664	1053146 ✓	0
	Ag	107	0.001	ug/L	0.000	52	42	51	11
	Cd	111	0.000	ug/L	0.001	950	115	112	5
	Cd	114	0.000	ug/L	0.000	137	65	67	9
	Sb	121	0.030	ug/L	0.007	23	182	628	16
	Sb	123	0.033	ug/L	0.007	21	151	520	15
	Ba	135	-0.000	ug/L	0.001	498	15	13	27
	Ba	137	-0.000	ug/L	0.000	455	26	24	12
>	Tb	159		ug/L			1253683	1184900 ✓	0
	Tl	205	0.004	ug/L	0.002	56	128	238	27
	Pb	208	-0.002	ug/L	0.000	16	347	243	6
	Bi	209		ug/L			2594753	2487094	1
	Th	232	0.066	ug/L	0.004	5	1408	4129	3
	U	238	0.002	ug/L	0.000	9	31	119	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:34:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	903770	1
[	Be	9	49.292	ug/L	0.322	0	23	157786	1
	C	13		ug/L			82469	82319	0
	Cl	37		ug/L			4833777	5034935	2
[>	Sc	45		ug/L			1144296	1164608	2
|	V	51	49.502	ug/L	0.801	1	9450	1078385	1
|	V-1	51	49.270	ug/L	0.817	1	48	1066159	0
|	Cr	52	50.491	ug/L	1.135	2	27897	938707	0
|	Cr	53	49.702	ug/L	1.513	3	145	102164	1
|	Mn	55	50.238	ug/L	1.326	2	487	1259770	0
[	Co	59	50.096	ug/L	2.710	5	76	923286	3
[>	Ge	72		ug/L			608948	604825	1
|	Ni	60	50.353	ug/L	0.844	1	28	196710	0
|	Ni	62	48.935	ug/L	1.020	2	64	27406	3
|	Cu	63	49.563	ug/L	0.776	1	101	440470	1
|	Cu	65	49.974	ug/L	1.047	2	39	195622	1
|	Zn	66	50.592	ug/L	1.292	2	991	116384	1
|	Zn	67	49.942	ug/L	0.643	1	141	19226	1
|	Zn	68	50.564	ug/L	0.999	1	706	82418	2
|	As	75	49.244	ug/L	0.569	1	318	104334	0
|	As-1	75	49.200	ug/L	0.783	1	12623	113865	1
|	Se	82	49.798	ug/L	0.543	1	-10	12479	0
|	Se	78	49.668	ug/L	1.030	2	12864	41815	0
[	Mo	98	49.128	ug/L	0.707	1	28	278384	2
	Y	89		ug/L			406158	402489	0
	Kr	83		ug/L			794	786	2
[>	In	115		ug/L			1093664	1081977	1
|	Ag	107	48.455	ug/L	0.279	0	42	729392	1
|	Cd	111	50.372	ug/L	0.362	0	115	266923	1
|	Cd	114	49.864	ug/L	0.870	1	65	650000	0
|	Sb	121	49.896	ug/L	0.659	1	182	774476	0
|	Sb	123	49.713	ug/L	1.122	2	151	585601	0
|	Ba	135	49.565	ug/L	0.563	1	15	236196	0
[	Ba	137	49.424	ug/L	0.770	1	26	408907	0
[>	Tb	159		ug/L			1253683	1244702	1
|	Tl	205	49.671	ug/L	0.616	1	128	1725042	0
|	Pb	208	49.921	ug/L	0.895	1	347	2263908	0
|	Bi	209		ug/L			2594753	2485023	1
|	Th	232	51.200	ug/L	0.961	1	1408	2295886	0
[	U	238	51.258	ug/L	1.339	2	31	2464617	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:41:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	891325	1
	Be	9	0.000	ug/L	0.002	3213	23	23	22
	C	13		ug/L			82469	80818	0
	Cl	37		ug/L			4833777	4842105	2
>	Sc	45		ug/L			1144296	1125646	1
	V	51	0.013	ug/L	0.012	88	9450	9570	1
	V-1	51	0.001	ug/L	0.001	150	48	68	47
	Cr	52	0.042	ug/L	0.051	120	27897	28166	1
	Cr	53	0.001	ug/L	0.006	1062	145	144	7
	Mn	55	-0.000	ug/L	0.001	225	487	469	4
	Co	59	0.000	ug/L	0.001	325	76	81	27
>	Ge	72		ug/L			608948	593415	1
	Ni	60	0.001	ug/L	0.001	44	28	32	7
	Ni	62	0.021	ug/L	0.011	53	64	74	7
	Cu	63	0.003	ug/L	0.001	32	101	125	5
	Cu	65	0.002	ug/L	0.003	182	39	46	29
	Zn	66	-0.218	ug/L	0.007	3	991	477	2
	Zn	67	-0.184	ug/L	0.016	8	141	69	7
	Zn	68	-0.190	ug/L	0.021	10	706	387	7
	As	75	-0.008	ug/L	0.015	186	318	293	11
	As-1	75	0.059	ug/L	0.055	93	12623	12419	0
	Se	82	0.024	ug/L	0.090	372	-10	-3	578
	Se	78	0.235	ug/L	0.231	98	12864	12670	0
	Mo	98	0.007	ug/L	0.002	21	28	68	12
	Y	89		ug/L			406158	395355	2
	Kr	83		ug/L			794	754	6
>	In	115		ug/L			1093664	1067229	0
	Ag	107	0.000	ug/L	0.001	139	42	47	18
	Cd	111	0.002	ug/L	0.001	81	115	121	6
	Cd	114	-0.000	ug/L	0.001	2577	65	63	13
	Sb	121	0.054	ug/L	0.004	7	182	1006	6
	Sb	123	0.056	ug/L	0.007	12	151	795	10
	Ba	135	0.000	ug/L	0.002	568	15	16	48
	Ba	137	0.001	ug/L	0.003	258	26	36	75
>	Tb	159		ug/L			1253683	1205647	0
	Tl	205	0.010	ug/L	0.005	50	128	467	37
	Pb	208	-0.000	ug/L	0.004	38391	347	333	50
	Bi	209		ug/L			2594753	2504883	1
	Th	232	0.103	ug/L	0.005	4	1408	5830	3
	U	238	0.004	ug/L	0.003	72	31	202	61

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:45:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	893134	0
	Be	9	0.199	ug/L	0.012	5	23	651	5
	C	13		ug/L			82469	83117	0
	Cl	37		ug/L			4833777	4902719	5
>	Sc	45		ug/L			1144296	1124137	1
	V	51	0.235	ug/L	0.023	9	9450	14182	2
	V-1	51	0.216	ug/L	0.005	2	48	4557	1
	Cr	52	0.578	ug/L	0.083	14	27897	37456	2
	Cr	53	0.511	ug/L	0.016	3	145	1154	1
	Mn	55	0.507	ug/L	0.010	1	487	12743	0
	Co	59	0.208	ug/L	0.008	3	76	3770	5
>	Ge	72		ug/L			608948	597789	0
	Ni	60	0.505	ug/L	0.021	4	28	1976	3
	Ni	62	0.483	ug/L	0.035	7	64	329	5
	Cu	63	0.533	ug/L	0.009	1	101	4781	1
	Cu	65	0.530	ug/L	0.005	1	39	2089	0
	Zn	66	4.118	ug/L	0.010	0	991	10259	1
	Zn	67	3.751	ug/L	0.123	3	141	1555	2
	Zn	68	4.057	ug/L	0.160	3	706	7173	2
	As	75	0.203	ug/L	0.018	8	318	736	4
	As-1	75	0.184	ug/L	0.097	52	12623	12765	0
	Se	82	0.568	ug/L	0.090	15	-10	130	16
	Se	78	0.452	ug/L	0.334	73	12864	12889	0
	Mo	98	0.193	ug/L	0.010	5	28	1108	6
	Y	89		ug/L			406158	387932	1
	Kr	83		ug/L			794	720	0
>	In	115		ug/L			1093664	1069689	1
	Ag	107	0.205	ug/L	0.008	3	42	3094	2
	Cd	111	0.105	ug/L	0.002	1	115	665	1
	Cd	114	0.107	ug/L	0.002	1	65	1439	0
	Sb	121	0.208	ug/L	0.003	1	182	3364	0
	Sb	123	0.204	ug/L	0.005	2	151	2527	2
	Ba	135	0.497	ug/L	0.016	3	15	2358	2
	Ba	137	0.506	ug/L	0.014	2	26	4163	2
>	Tb	159		ug/L			1253683	1219587	1
	Tl	205	0.210	ug/L	0.004	1	128	7284	1
	Pb	208	0.107	ug/L	0.004	3	347	5075	2
	Bi	209		ug/L			2594753	2520245	0
	Th	232	0.200	ug/L	0.003	1	1408	10148	2
	U	238	0.202	ug/L	0.002	1	31	9555	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:49:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	933240 ✓	2
[	Be	9	0.002	ug/L	0.001	79	23	30	17
	C	13		ug/L			82469	161933	1
	Cl	37		ug/L			4833777	13649840	2
[>	Sc	45		ug/L			1144296	1196251 ✓	0
|	V	51	0.187	ug/L	0.050	26	9450	14016	7
|	V-1	51	1.309	ug/L	0.042	3	48	29155	2
|	Cr	52	0.621	ug/L	0.056	9	27897	40663	1
|	Cr	53	4.402	ug/L	0.161	3	145	9436	3
|	Mn	55	0.075	ug/L	0.004	4	487	2431	3
[	Co	59	0.027	ug/L	0.002	9	76	595	8
[>	Ge	72		ug/L			608948	596554 ✓	1
|	Ni	60	0.417	ug/L	0.017	4	28	1634	2
|	Ni	62	3.824	ug/L	0.748	19	64	2171	19
|	Cu	63	1.162	ug/L	0.072	6	101	10282	6
|	Cu	65	0.426	ug/L	0.009	2	39	1683	1
|	Zn	66	1.325	ug/L	0.072	5	991	3951	2
|	Zn	67	7.599	ug/L	0.185	2	141	3002	1
|	Zn	68	0.854	ug/L	0.051	5	706	2053	3
|	As	75	0.030	ug/L	0.073	244	318	375	41
|	As-1	75	0.288	ug/L	0.077	26	12623	12949	1
|	Se	82	-0.290	ug/L	0.070	24	-10	-81	22
|	Se	78	1.045	ug/L	0.367	35	12864	13203	0
[	Mo	98	426.179 ✓	ug/L	8.621	2	28	2381373	1
	Y	89		ug/L			406158	410661	1
	Kr	83		ug/L			794	1112	4
[>	In	115		ug/L			1093664	1090181 ✓	0
|	Ag	107	0.031	ug/L	0.001	2	42	509	2
|	Cd	111	0.103	ug/L	0.001	0	115	664	0
|	Cd	114	0.258	ug/L	0.011	4	65	3457	4
|	Sb	121	0.089	ug/L	0.004	4	182	1580	4
|	Sb	123	0.088	ug/L	0.003	3	151	1192	2
|	Ba	135	0.061	ug/L	0.006	10	15	307	10
[	Ba	137	0.050	ug/L	0.001	2	26	444	2
[>	Tb	159		ug/L			1253683	1301318 ✓	0
|	Tl	205	0.041	ug/L	0.001	2	128	1613	1
|	Pb	208	0.037	ug/L	0.000	0	347	2121	0
|	Bi	209		ug/L			2594753	2448513	0
|	Th	232	0.275	ug/L	0.088	31	1408	14386	29
[	U	238	0.017	ug/L	0.001	7	31	880	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 13:55:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	949106	1
[	Be	9	-0.001	ug/L	0.001	98	23	22	6
	C	13		ug/L			82469	163573	1
	Cl	37		ug/L			4833777	13472299	4
[>	Sc	45		ug/L			1144296	1183191	1
[	V	51	0.139	ug/L	0.197	142	9450	12798	33
[	V-1	51	1.313	ug/L	0.034	2	48	28915	1
[	Cr	52	20.777	ug/L	0.707	3	27897	409402	1
[	Cr	53	24.580	ug/L	0.561	2	145	51416	1
[	Mn	55	18.962	ug/L	0.468	2	487	483444	1
[	Co	59	19.414	ug/L	0.598	3	76	363711	1
[>	Ge	72		ug/L			608948	582334	2
[	Ni	60	20.631	ug/L	0.605	2	28	77584	0
[	Ni	62	24.400	ug/L	0.644	2	64	13190	4
[	Cu	63	20.840	ug/L	0.408	1	101	178325	1
[	Cu	65	20.444	ug/L	0.646	3	39	77041	0
[	Zn	66	19.923	ug/L	1.212	6	991	44661	3
[	Zn	67	24.004	ug/L	1.174	4	141	8961	3
[	Zn	68	18.896	ug/L	0.630	3	706	30060	0
[	As	75	19.324	ug/L	0.577	2	318	39585	0
[	As-1	75	20.242	ug/L	0.731	3	12623	52186	0
[	Se	82	-0.310	ug/L	0.054	17	-10	-84	15
[	Se	78	1.613	ug/L	0.486	30	12864	13206	1
[	Mo	98	433.367	ug/L	7.246	1	28	2363357	1
	Y	89		ug/L			406158	411500	0
	Kr	83		ug/L			794	1091	4
[>	In	115		ug/L			1093664	1091485	0
[	Ag	107	20.390	ug/L	0.400	1	42	309611	1
[	Cd	111	19.630	ug/L	0.220	1	115	105001	0
[	Cd	114	19.864	ug/L	0.154	0	65	261299	1
[	Sb	121	0.062	ug/L	0.002	3	182	1158	3
[	Sb	123	0.063	ug/L	0.002	3	151	896	2
[	Ba	135	0.055	ug/L	0.004	7	15	278	7
[	Ba	137	0.043	ug/L	0.001	3	26	383	2
[>	Tb	159		ug/L			1253683	1319580	0
[	Tl	205	0.031	ug/L	0.001	3	128	1272	3
[	Pb	208	0.028	ug/L	0.001	3	347	1694	2
[	Bi	209		ug/L			2594753	2456397	0
[	Th	232	0.083	ug/L	0.013	15	1408	5408	11
[	U	238	0.000	ug/L	0.000	120	31	36	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:02:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	885249	2
[	Be	9	192.971	ug/L	1.965	1	23	604913	1
	C	13		ug/L			82469	83802	0
	Cl	37		ug/L			4833777	4959944	1
[>	Sc	45		ug/L			1144296	1101531	0
[	V	51	202.468	ug/L	6.462	3	9450	4143661	2
[	V-1	51	202.615	ug/L	6.101	3	48	4147011	2
[	Cr	52	204.853	ug/L	3.623	1	27897	3520765	1
[	Cr	53	205.331	ug/L	3.024	1	145	398917	1
[	Mn	55	200.642	ug/L	5.411	2	487	4758412	1
[	Co	59	203.718	ug/L	2.196	1	76	3553563	1
[>	Ge	72		ug/L			608948	557620	1
[	Ni	60	198.875	ug/L	7.392	3	28	716041	2
[	Ni	62	199.749	ug/L	4.254	2	64	102923	1
[	Cu	63	195.425	ug/L	2.883	1	101	1600798	1
[	Cu	65	198.990	ug/L	3.498	1	39	718014	0
[	Zn	66	194.019	ug/L	6.246	3	991	408862	1
[	Zn	67	196.969	ug/L	5.568	2	141	69509	1
[	Zn	68	194.304	ug/L	5.991	3	706	290053	1
[	As	75	201.660	ug/L	4.999	2	318	392957	1
[	As-1	75	201.744	ug/L	5.555	2	12623	394566	1
[	Se	82	196.736	ug/L	2.658	1	-10	45480	0
[	Se	78	196.909	ug/L	3.705	1	12864	117908	0
[	Mo	98	219.763	ug/L	5.564	2	28	1147654	1
	Y	89		ug/L			406158	381681	1
	Kr	83		ug/L			794	1006	1
[>	In	115		ug/L			1093664	1041060	0
[	Ag	107	200.670	ug/L	3.486	1	42	2905953	0
[	Cd	111	196.310	ug/L	3.041	1	115	1000550	0
[	Cd	114	203.688	ug/L	3.325	1	65	2554692	0
[	Sb	121	206.075	ug/L	2.958	1	182	3077238	0
[	Sb	123	207.014	ug/L	2.378	1	151	2346177	0
[	Ba	135	207.696	ug/L	3.195	1	15	952347	1
[	Ba	137	207.820	ug/L	3.354	1	26	1654389	1
[>	Tb	159		ug/L			1253683	1246595	1
[	Tl	205	199.665	ug/L	2.235	1	128	6944940	0
[	Pb	208	199.782	ug/L	2.153	1	347	9074007	0
[	Bi	209		ug/L			2594753	2346766	1
[	Th	232	198.762	ug/L	2.437	1	1408	8923629	0
[	U	238	198.065	ug/L	3.404	1	31	9539862	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:09:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	839331	1
[	Be	9	284.060	ug/L	5.216	1	23	844472	2
	C	13		ug/L			82469	85852	3
	Cl	37		ug/L			4833777	4820895	3
[>	Sc	45		ug/L			1144296	1079541	1
[	V	51	314.543	ug/L	4.447	1	9450	6304538	1
[	V-1	51	312.658	ug/L	5.271	1	48	6271957	1
[	Cr	52	309.016	ug/L	8.336	2	27897	5190673	1
[	Cr	53	302.704	ug/L	8.567	2	145	576126	1
[	Mn	55	300.072	ug/L	4.663	1	487	6974420	1
[	Co	59	301.836	ug/L	6.083	2	76	5158867	0
[>	Ge	72		ug/L			608948	540205	0
[	Ni	60	303.348	ug/L	7.327	2	28	1058385	1
[	Ni	62	303.759	ug/L	4.889	1	64	151627	1
[	Cu	63	300.668	ug/L	4.705	1	101	2386208	1
[	Cu	65	293.244	ug/L	3.239	1	39	1025245	1
[	Zn	66	284.133	ug/L	2.779	0	991	579850	1
[	Zn	67	287.992	ug/L	2.251	0	141	98428	0
[	Zn	68	284.902	ug/L	2.443	0	706	411878	1
[	As	75	303.660	ug/L	3.592	1	318	573209	1
[	As-1	75	305.872	ug/L	4.568	1	12623	573881	1
[	Se	82	280.727	ug/L	1.782	0	-10	62883	0
[	Se	78	286.966	ug/L	1.194	0	12864	161279	0
[	Mo	98	317.096	ug/L	3.353	1	28	1604613	0
	Y	89		ug/L			406158	364085	1
	Kr	83		ug/L			794	1142	2
[>	In	115		ug/L			1093664	1002433	0
[	Ag	107	277.144	ug/L	5.605	2	42	3865061	2
[	Cd	111	293.844	ug/L	3.131	1	115	1442191	1
[	Cd	114	303.685	ug/L	2.098	0	65	3667862	0
[	Sb	121	305.731	ug/L	3.129	1	182	4396158	0
[	Sb	123	303.069	ug/L	1.832	0	151	3307496	0
[	Ba	135	313.585	ug/L	3.202	1	15	1384530	1
[	Ba	137	319.477	ug/L	3.430	1	26	2449007	0
[>	Tb	159		ug/L			1253683	1210317	0
[	Tl	205	300.480	ug/L	3.347	1	128	10147464	0
[	Pb	208	298.242	ug/L	3.569	1	347	13151863	0
[	Bi	209		ug/L			2594753	2231606	0
[	Th	232	297.298	ug/L	2.785	0	1408	12959068	0
[	U	238	293.602	ug/L	1.050	0	31	13731411	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:16:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	867320	1
	Be	9	0.004	ug/L	0.005	120	23	34	41
	C	13		ug/L			82469	81956	2
	Cl	37		ug/L			4833777	4844981	3
>	Sc	45		ug/L			1144296	1090583	2
	V	51	0.026	ug/L	0.008	31	9450	9536	3
	V-1	51	0.015	ug/L	0.002	12	48	358	10
	Cr	52	0.083	ug/L	0.027	32	27897	27993	2
	Cr	53	0.047	ug/L	0.011	22	145	228	6
	Mn	55	0.016	ug/L	0.002	14	487	837	6
	Co	59	0.003	ug/L	0.002	74	76	117	30
>	Ge	72		ug/L			608948	571127	2
	Ni	60	0.043	ug/L	0.005	11	28	186	7
	Ni	62	1.814	ug/L	0.671	37	64	1013	33
	Cu	63	0.152	ug/L	0.043	28	101	1362	25
	Cu	65	0.037	ug/L	0.011	28	39	174	20
	Zn	66	0.311	ug/L	0.031	10	991	1599	2
	Zn	67	0.325	ug/L	0.045	13	141	250	4
	Zn	68	0.330	ug/L	0.038	11	706	1165	3
	As	75	0.003	ug/L	0.014	486	318	304	8
	As-1	75	0.189	ug/L	0.166	87	12623	12202	0
	Se	82	0.017	ug/L	0.112	662	-10	-5	483
	Se	78	0.682	ug/L	0.575	84	12864	12437	0
	Mo	98	0.045	ug/L	0.001	2	28	267	4
	Y	89		ug/L			406158	372021	1
	Kr	83		ug/L			794	751	8
>	In	115		ug/L			1093664	1084321	1
	Ag	107	0.010	ug/L	0.006	59	42	194	47
	Cd	111	0.013	ug/L	0.019	143	115	184	54
	Cd	114	0.013	ug/L	0.017	124	65	239	90
	Sb	121	0.299	ug/L	0.028	9	182	4826	8
	Sb	123	0.291	ug/L	0.030	10	151	3587	9
	Ba	135	0.016	ug/L	0.010	60	15	92	50
	Ba	137	0.014	ug/L	0.007	51	26	144	42
>	Tb	159		ug/L			1253683	1198272	0
	Tl	205	0.043	ug/L	0.020	46	128	1553	43
	Pb	208	0.014	ug/L	0.005	34	347	958	22
	Bi	209		ug/L			2594753	2501366	0
	Th	232	0.201	ug/L	0.008	3	1408	10038	2
	U	238	0.010	ug/L	0.005	47	31	471	44

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:22:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	860616	0
[	Be	9	-0.001	ug/L	0.001	105	23	19	12
	C	13		ug/L			82469	83110	1
	Cl	37		ug/L			4833777	4711241	1
[>	Sc	45		ug/L			1144296	1084304	0
[	V	51	0.029	ug/L	0.019	66	9450	9535	3
[	V-1	51	0.010	ug/L	0.001	13	48	242	10
[	Cr	52	0.103	ug/L	0.065	62	27897	28167	3
[	Cr	53	0.038	ug/L	0.004	10	145	211	4
[	Mn	55	0.009	ug/L	0.001	6	487	668	1
[	Co	59	0.001	ug/L	0.001	132	76	85	20
[>	Ge	72		ug/L			608948	570146	2
[	Ni	60	0.042	ug/L	0.002	4	28	183	2
[	Ni	62	0.261	ug/L	0.102	39	64	196	25
[	Cu	63	0.027	ug/L	0.004	13	101	322	7
[	Cu	65	0.016	ug/L	0.002	15	39	95	7
[	Zn	66	0.012	ug/L	0.006	46	991	954	2
[	Zn	67	0.066	ug/L	0.016	25	141	156	5
[	Zn	68	0.037	ug/L	0.036	98	706	717	7
[	As	75	-0.005	ug/L	0.020	366	318	287	13
[	As-1	75	0.178	ug/L	0.188	105	12623	12159	0
[	Se	82	-0.034	ug/L	0.049	143	-10	-17	64
[	Se	78	0.631	ug/L	0.669	106	12864	12387	0
[	Mo	98	0.012	ug/L	0.002	16	28	93	12
	Y	89		ug/L			406158	371164	1
	Kr	83		ug/L			794	759	1
[>	In	115		ug/L			1093664	1052022	0
[	Ag	107	0.002	ug/L	0.001	48	42	64	17
[	Cd	111	0.000	ug/L	0.000	99	115	112	0
[	Cd	114	0.001	ug/L	0.000	15	65	73	1
[	Sb	121	0.079	ug/L	0.009	10	182	1368	9
[	Sb	123	0.079	ug/L	0.011	13	151	1051	11
[	Ba	135	0.006	ug/L	0.001	9	15	43	6
[	Ba	137	0.007	ug/L	0.001	21	26	80	14
[>	Tb	159		ug/L			1253683	1189207	0
[	Tl	205	0.019	ug/L	0.010	53	128	756	44
[	Pb	208	0.005	ug/L	0.001	11	347	536	3
[	Bi	209		ug/L			2594753	2517677	0
[	Th	232	0.049	ug/L	0.003	6	1408	3436	4
[	U	238	0.002	ug/L	0.000	7	31	103	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:28:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	890802	1
[	Be	9	-0.001	ug/L	0.002	199	23	20	23
	C	13		ug/L			82469	82217	1
	Cl	37		ug/L			4833777	4754829	3
[>	Sc	45		ug/L			1144296	1081393	2
|	V	51	0.024	ug/L	0.011	45	9450	9416	2
|	V-1	51	0.009	ug/L	0.000	4	48	224	2
|	Cr	52	0.092	ug/L	0.047	50	27897	27898	2
|	Cr	53	0.040	ug/L	0.013	32	145	213	9
|	Mn	55	0.016	ug/L	0.001	4	487	825	0
[	Co	59	0.001	ug/L	0.001	50	76	90	11
[>	Ge	72		ug/L			608948	581858	0
|	Ni	60	0.054	ug/L	0.005	9	28	231	7
|	Ni	62	0.091	ug/L	0.014	15	64	110	6
|	Cu	63	0.185	ug/L	0.006	3	101	1680	2
|	Cu	65	0.186	ug/L	0.006	3	39	736	3
|	Zn	66	0.591	ug/L	0.032	5	991	2244	2
|	Zn	67	0.577	ug/L	0.049	8	141	347	4
|	Zn	68	0.572	ug/L	0.044	7	706	1563	3
|	As	75	0.005	ug/L	0.011	202	318	314	6
|	As-1	75	0.013	ug/L	0.028	214	12623	12087	0
|	Se	82	-0.005	ug/L	0.024	465	-10	-11	54
|	Se	78	0.013	ug/L	0.086	642	12864	12299	0
[	Mo	98	0.005	ug/L	0.001	25	28	55	13
	Y	89		ug/L			406158	370589	0
	Kr	83		ug/L			794	753	5
[>	In	115		ug/L			1093664	1078900	1
|	Ag	107	0.001	ug/L	0.000	10	42	51	1
|	Cd	111	0.001	ug/L	0.003	357	115	118	12
|	Cd	114	0.000	ug/L	0.001	293	65	68	15
|	Sb	121	0.036	ug/L	0.005	14	182	744	12
|	Sb	123	0.036	ug/L	0.006	17	151	569	14
|	Ba	135	0.029	ug/L	0.006	19	15	151	16
[	Ba	137	0.027	ug/L	0.001	2	26	251	3
[>	Tb	159		ug/L			1253683	1210363	0
|	Tl	205	0.011	ug/L	0.006	59	128	483	43
|	Pb	208	0.016	ug/L	0.001	5	347	1028	4
|	Bi	209		ug/L			2594753	2516683	1
|	Th	232	0.022	ug/L	0.003	12	1408	2339	5
[	U	238	0.001	ug/L	0.000	19	31	60	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:32:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			923208	898775	1
⌊	Be	9	48.711	ug/L	0.735	1	23	155063	1
	C	13		ug/L			82469	81126	0
	Cl	37		ug/L			4833777	4773762	1
⌈>	Sc	45		ug/L			1144296	1126311	1
|	V	51	49.927	ug/L	0.880	1	9450	1051876	1
|	V-1	51	49.756	ug/L	0.850	1	48	1041398	1
|	Cr	52	50.582	ug/L	1.288	2	27897	909515	1
|	Cr	53	50.001	ug/L	1.104	2	145	99424	1
|	Mn	55	49.238	ug/L	0.656	1	487	1194421	0
⌊	Co	59	49.700	ug/L	0.909	1	76	886453	1
⌈>	Ge	72		ug/L			608948	591497	1
|	Ni	60	49.289	ug/L	0.726	1	28	188301	0
|	Ni	62	48.487	ug/L	0.370	0	64	26552	1
|	Cu	63	49.319	ug/L	1.538	3	101	428551	2
|	Cu	65	50.463	ug/L	1.959	3	39	193117	1
|	Zn	66	50.227	ug/L	0.884	1	991	113004	1
|	Zn	67	50.151	ug/L	0.429	0	141	18879	1
|	Zn	68	49.879	ug/L	1.887	3	706	79481	1
|	As	75	49.251	ug/L	0.708	1	318	102036	0
|	As-1	75	49.555	ug/L	1.008	2	12623	112054	0
|	Se	82	48.469	ug/L	1.210	2	-10	11876	1
|	Se	78	49.426	ug/L	2.128	4	12864	40745	1
⌊	Mo	98	47.914	ug/L	1.389	2	28	265454	2
	Y	89		ug/L			406158	383466	0
	Kr	83		ug/L			794	756	1
⌈>	In	115		ug/L			1093664	1074282	0
|	Ag	107	47.737	ug/L	1.004	2	42	713420	1
|	Cd	111	50.609	ug/L	0.308	0	115	266279	0
|	Cd	114	51.299	ug/L	0.579	1	65	664016	0
|	Sb	121	50.005	ug/L	0.260	0	182	770721	0
|	Sb	123	49.875	ug/L	0.321	0	151	583436	0
|	Ba	135	50.753	ug/L	0.267	0	15	240151	0
⌊	Ba	137	50.456	ug/L	0.935	1	26	414508	1
⌈>	Tb	159		ug/L			1253683	1248627	1
|	Tl	205	49.491	ug/L	0.080	0	128	1724501	1
|	Pb	208	49.219	ug/L	0.258	0	347	2239550	0
|	Bi	209		ug/L			2594753	2487148	1
|	Th	232	51.137	ug/L	0.579	1	1408	2300655	0
⌊	U	238	51.012	ug/L	0.538	1	31	2461299	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 14:39:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	878296	2
	Be	9	-0.002	ug/L	0.001	87	23	17	21
	C	13		ug/L			82469	82915	0
	Cl	37		ug/L			4833777	4656435	5
>	Sc	45		ug/L			1144296	1081466	1
	V	51	0.022	ug/L	0.011	52	9450	9366	1
	V-1	51	0.005	ug/L	0.001	20	48	137	12
	Cr	52	0.070	ug/L	0.032	44	27897	27540	0
	Cr	53	0.012	ug/L	0.005	42	145	160	6
	Mn	55	0.000	ug/L	0.001	574	487	465	4
	Co	59	0.001	ug/L	0.000	84	76	80	8
>	Ge	72		ug/L			608948	577264	0
	Ni	60	-0.000	ug/L	0.000	70	28	26	3
	Ni	62	0.022	ug/L	0.010	43	64	72	7
	Cu	63	0.006	ug/L	0.003	46	101	145	16
	Cu	65	0.001	ug/L	0.000	25	39	42	3
	Zn	66	-0.218	ug/L	0.005	2	991	464	2
	Zn	67	-0.186	ug/L	0.015	7	141	66	7
	Zn	68	-0.205	ug/L	0.011	5	706	353	5
	As	75	0.002	ug/L	0.016	693	318	306	10
	As-1	75	0.081	ug/L	0.091	111	12623	12126	1
	Se	82	0.011	ug/L	0.024	215	-10	-7	81
	Se	78	0.268	ug/L	0.349	130	12864	12345	1
	Mo	98	0.009	ug/L	0.003	30	28	76	19
	Y	89		ug/L			406158	372650	1
	Kr	83		ug/L			794	738	4
>	In	115		ug/L			1093664	1064552	1
	Ag	107	0.000	ug/L	0.001	516	42	43	25
	Cd	111	0.001	ug/L	0.001	126	115	115	1
	Cd	114	-0.000	ug/L	0.001	362	65	61	15
	Sb	121	0.066	ug/L	0.009	13	182	1194	12
	Sb	123	0.064	ug/L	0.006	9	151	892	9
	Ba	135	0.001	ug/L	0.000	81	15	17	10
	Ba	137	-0.000	ug/L	0.000	400	26	25	10
>	Tb	159		ug/L			1253683	1189174	0
	Tl	205	0.009	ug/L	0.005	58	128	430	42
	Pb	208	-0.002	ug/L	0.001	39	347	237	16
	Bi	209		ug/L			2594753	2510530	1
	Th	232	0.101	ug/L	0.004	4	1408	5648	3
	U	238	0.002	ug/L	0.000	4	31	125	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 14:46:13
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	932146	0
	Be	9	0.169	ug/L	0.012	7	23	580	7
	C	13		ug/L			82469	88088	2
	Cl	37		ug/L			4833777	4680350	0
>	Sc	45		ug/L			1144296	1166115	0
	V	51	5.661	ug/L	0.064	1	9450	132035	0
	V-1	51	5.687	ug/L	0.076	1	48	123291	1
	Cr	52	6.611	ug/L	0.246	3	27897	147784	2
	Cr	53	6.692	ug/L	0.230	3	145	13903	2
	Mn	55	247.985	ug/L	5.657	2	487	6226192	1
	Co	59	1.854	ug/L	0.023	1	76	34318	2
>	Ge	72		ug/L			608948	600091	1
	Ni	60	6.640	ug/L	0.227	3	28	25755	1
	Ni	62	6.777	ug/L	0.136	2	64	3820	3
	Cu	63	3.696	ug/L	0.101	2	101	32669	1
	Cu	65	3.781	ug/L	0.087	2	39	14717	0
	Zn	66	45.079	ug/L	1.089	2	991	103000	2
	Zn	67	46.226	ug/L	0.606	1	141	17669	2
	Zn	68	46.348	ug/L	1.519	3	706	74982	1
	As	75	3.275	ug/L	0.018	0	318	7177	2
	As-1	75	3.170	ug/L	0.109	3	12623	18915	0
	Se	82	0.058	ug/L	0.019	33	-10	4	110
	Se	78	-0.576	ug/L	0.419	72	12864	12340	0
	Mo	98	0.109	ug/L	0.006	5	28	639	7
	Y	89		ug/L			406158	428363	2
	Kr	83		ug/L			794	799	2
>	In	115		ug/L			1093664	1102223	1
	Ag	107	~ 0.037	ug/L	0.001	1	42	609	2
	Cd	111	0.476	ug/L	0.015	3	115	2683	1
	Cd	114	0.435	ug/L	0.011	2	65	5845	0
	Sb	121	0.038	ug/L	0.005	12	182	789	10
	Sb	123	0.035	ug/L	0.004	10	151	578	7
	Ba	135	81.781	ug/L	0.873	1	15	397012	1
	Ba	137	81.684	ug/L	0.575	0	26	688493	1
>	Tb	159		ug/L			1253683	1259706	0
	Tl	205	0.042	ug/L	0.004	9	128	1622	8
	Pb	208	12.480	ug/L	0.096	0	347	573148	0
	Bi	209		ug/L			2594753	2586304	0
	Th	232	1.168	ug/L	0.021	1	1408	54391	0
	U	238	0.139	ug/L	0.003	2	31	6777	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:50:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	949944	1
[	Be	9	0.847	ug/L	0.005	0	23	2873	0
	C	13		ug/L			82469	112257	2
	Cl	37		ug/L			4833777	4693091	0
[>	Sc	45		ug/L			1144296	1289214	0
[	V	51	26.295	ug/L	0.297	1	9450	639227	1
[	V-1	51	26.319	ug/L	0.253	0	48	630611	1
[	Cr	52	30.679	ug/L	0.761	2	27897	643846	1
[	Cr	53	30.724	ug/L	0.277	0	145	69999	0
[	Mn	55	1114.230	ug/L	12.560	1	487	30930615	1
[	Co	59	8.483	ug/L	0.050	0	76	173274	0
[>	Ge	72		ug/L			608948	600942	0
[	Ni	60	33.030	ug/L	0.495	1	28	128226	0
[	Ni	62	34.091	ug/L	0.319	0	64	18986	1
[	Cu	63	18.104	ug/L	0.370	2	101	159904	1
[	Cu	65	18.753	ug/L	0.277	1	39	72968	0
[	Zn	66	216.399	ug/L	4.930	2	991	491426	1
[	Zn	67	225.621	ug/L	3.459	1	141	85804	0
[	Zn	68	231.885	ug/L	2.474	1	706	373045	1
[	As	75	16.375	ug/L	0.213	1	318	34682	1
[	As-1	75	16.593	ug/L	0.283	1	12623	46411	0
[	Se	82	-0.286	ug/L	0.041	14	-10	-81	11
[	Se	78	-0.225	ug/L	0.252	111	12864	12563	0
[	Mo	98	0.555	ug/L	0.013	2	28	3155	3
	Y	89		ug/L			406158	570465	1
	Kr	83		ug/L			794	1366	1
[>	In	115		ug/L			1093664	1083557	0
[	Ag	107	0.202	ug/L	0.010	4	42	3087	3
[	Cd	111	2.358	ug/L	0.058	2	115	12619	1
[	Cd	114	2.163	ug/L	0.062	2	65	28296	2
[	Sb	121	0.085	ug/L	0.005	5	182	1495	4
[	Sb	123	0.084	ug/L	0.004	4	151	1137	3
[	Ba	135	439.440	ug/L	6.888	1	15	2097098	1
[	Ba	137	424.118	ug/L	9.925	2	26	3513874	1
[>	Tb	159		ug/L			1253683	1274577	0
[	Tl	205	0.192	ug/L	0.005	2	128	6974	2
[	Pb	208	62.042	ug/L	0.683	1	347	2881719	1
[	Bi	209		ug/L			2594753	2483825	0
[	Th	232	5.618	ug/L	0.051	0	1408	259326	1
[	U	238	0.693	ug/L	0.002	0	31	34145	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	936726	0
[	Be	9	0.820	ug/L	0.028	3	23	2745	2
	C	13		ug/L			82469	112751	3
	Cl	37		ug/L			4833777	4763014	5
[>	Sc	45		ug/L			1144296	1291942	0
[	V	51	29.393	ug/L	0.036	0	9450	714763	0
[	V-1	51	29.377	ug/L	0.246	0	48	705358	1
[	Cr	52	29.489	ug/L	0.923	3	27897	621450	3
[	Cr	53	29.437	ug/L	0.136	0	145	67216	0
[	Mn	55	1013.202	ug/L	17.797	1	487	28183015	1
[	Co	59	8.429	ug/L	0.099	1	76	172533	1
[>	Ge	72		ug/L			608948	594117	1
[	Ni	60	33.179	ug/L	0.263	0	28	127344	0
[	Ni	62	34.160	ug/L	0.819	2	64	18806	1
[	Cu	63	17.631	ug/L	0.338	1	101	153953	0
[	Cu	65	17.887	ug/L	0.363	2	39	68811	2
[	Zn	66	207.696	ug/L	6.548	3	991	466324	2
[	Zn	67	210.793	ug/L	2.215	1	141	79265	1
[	Zn	68	220.813	ug/L	3.977	1	706	351169	0
[	As	75	15.188	ug/L	0.151	0	318	31824	0
[	As-1	75	15.430	ug/L	0.260	1	12623	43529	0
[	Se	82	-0.218	ug/L	0.064	29	-10	-63	24
[	Se	78	-0.011	ug/L	0.368	3350	12864	12543	0
[	Mo	98	0.596	ug/L	0.009	1	28	3344	1
	Y	89		ug/L			406158	574518	1
	Kr	83		ug/L			794	1314	1
[>	In	115		ug/L			1093664	1085695	0
[	Ag	107	~0.184	ug/L	0.007	3	42	2813	4
[	Cd	111	2.069	ug/L	0.059	2	115	11112	2
[	Cd	114	1.900	ug/L	0.036	1	65	24912	1
[	Sb	121	0.079	ug/L	0.003	3	182	1405	3
[	Sb	123	0.078	ug/L	0.003	3	151	1068	2
[	Ba	135	385.617	ug/L	1.977	0	15	1843977	0
[	Ba	137	397.305	ug/L	2.129	0	26	3298672	0
[>	Tb	159		ug/L			1253683	1290343	1
[	Tl	205	0.181	ug/L	0.005	2	128	6639	2
[	Pb	208	53.888	ug/L	1.008	1	347	2533623	0
[	Bi	209		ug/L			2594753	2489806	0
[	Th	232	5.561	ug/L	0.034	0	1408	259841	0
[	U	238	0.651	ug/L	0.007	1	31	32488	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 14:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	940430	1
	Be	9	25.099	ug/L	0.441	1	23	83598	0
	C	13		ug/L			82469	100124	2
	Cl	37		ug/L			4833777	4835756	1
>	Sc	45		ug/L			1144296	1245810	1
	V	51	56.566	ug/L	0.794	1	9450	1316836	1
	V-1	51	56.497	ug/L	0.392	0	48	1307972	0
	Cr	52	58.595	ug/L	0.892	1	27897	1160694	1
	Cr	53	58.347	ug/L	0.533	0	145	128324	1
	Mn	55	1102.214	ug/L	22.034	1	487	29570175	3
	Co	59	35.062	ug/L	0.914	2	76	691643	1
>	Ge	72		ug/L			608948	598771	0
	Ni	60	58.081	ug/L	0.739	1	28	224654	1
	Ni	62	60.835	ug/L	0.777	1	64	33709	0
	Cu	63	43.389	ug/L	0.265	0	101	381761	1
	Cu	65	44.181	ug/L	0.561	1	39	171253	1
	Zn	66	277.397	ug/L	5.404	1	991	627454	1
	Zn	67	279.510	ug/L	7.051	2	141	105883	2
	Zn	68	295.753	ug/L	6.567	2	706	473849	1
	As	75	41.908	ug/L	0.621	1	318	87953	1
	As-1	75	41.448	ug/L	0.220	0	12623	96925	0
	Se	82	75.028	ug/L	1.605	2	-10	18619	1
	Se	78	77.108	ug/L	0.376	0	12864	57284	0
	Mo	98	22.723	ug/L	0.161	0	28	127482	0
	Y	89		ug/L			406158	569354	0
	Kr	83		ug/L			794	1331	3
>	In	115		ug/L			1093664	1061447	0
	Ag	107	22.960	ug/L	0.171	0	42	339068	0
	Cd	111	27.027	ug/L	0.514	1	115	140562	2
	Cd	114	27.445	ug/L	0.189	0	65	351045	0
	Sb	121	1.777	ug/L	0.007	0	182	27231	0
	Sb	123	1.781	ug/L	0.019	1	151	20723	1
	Ba	135	436.734	ug/L	10.993	2	15	2041662	2
	Ba	137	428.843	ug/L	5.536	1	26	3480826	0
>	Tb	159		ug/L			1253683	1271378	0
	Tl	205	25.314	ug/L	0.217	0	128	898137	0
	Pb	208	83.547	ug/L	0.329	0	347	3870571	0
	Bi	209		ug/L			2594753	2452287	0
	Th	232	31.079	ug/L	0.063	0	1408	1424394	0
	U	238	25.903	ug/L	0.534	2	31	1272478	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:02:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			923208	938935	0
[	**Be**	**9**	**0.474**	ug/L	0.015	3	23	1599	3
	C	**13**		ug/L			82469	118557	0
	Cl	**37**		ug/L			4833777	4674870	1
[>	**Sc**	**45**		ug/L			1144296	1267782	0
[	**V**	**51**	**26.792**	ug/L	0.344	1	9450	640253	1
[	**V-1**	**51**	**26.847**	ug/L	0.197	0	48	632546	0
[	**Cr**	**52**	**16.461**	ug/L	0.171	1	27897	354070	0
[	**Cr**	**53**	**16.724**	ug/L	0.371	2	145	37545	2
[	**Mn**	**55**	**1346.126**	ug/L	7.024	0	487	36745445	0
[	**Co**	**59**	**6.786**	ug/L	0.008	0	76	136323	0
[>	**Ge**	**72**		ug/L			608948	602744	0
[	**Ni**	**60**	**13.783**	ug/L	0.342	2	28	53685	2
[	**Ni**	**62**	**15.208**	ug/L	0.107	0	64	8530	0
[	**Cu**	**63**	**16.647**	ug/L	0.290	1	101	147499	1
[	**Cu**	**65**	**17.114**	ug/L	0.157	0	39	66798	1
[	**Zn**	**66**	**269.258**	ug/L	0.444	0	991	613148	0
[	**Zn**	**67**	**268.300**	ug/L	4.924	1	141	102320	1
[	**Zn**	**68**	**277.910**	ug/L	6.717	2	706	448273	2
[	**As**	**75**	**17.694**	ug/L	0.195	1	318	37563	0
[	**As-1**	**75**	**17.966**	ug/L	0.244	1	12623	49371	0
[	**Se**	**82**	**-0.035**	ug/L	0.026	76	-10	-18	35
[	**Se**	**78**	**-0.306**	ug/L	0.177	57	12864	12555	0
[	**Mo**	**98**	**0.460**	ug/L	0.019	4	28	2626	4
	Y	**89**		ug/L			406158	518076	1
	Kr	**83**		ug/L			794	1057	2
[>	**In**	**115**		ug/L			1093664	1109524	0
[	**Ag**	**107**	**0.126**	ug/L	0.003	2	42	1985	2
[	**Cd**	**111**	**5.340**	ug/L	0.042	0	115	29120	0
[	**Cd**	**114**	**5.290**	ug/L	0.026	0	65	70776	0
[	**Sb**	**121**	**0.447**	ug/L	0.009	1	182	7292	1
[	**Sb**	**123**	**0.448**	ug/L	0.011	2	151	5563	2
[	**Ba**	**135**	**345.600**	ug/L	5.452	1	15	1688867	1
[	**Ba**	**137**	**350.175**	ug/L	3.576	1	26	2971216	1
[>	**Tb**	**159**		ug/L			1253683	1265353	0
[	**Tl**	**205**	**0.327**	ug/L	0.003	0	128	11686	0
[	**Pb**	**208**	**248.515**	ug/L	2.761	1	347	11457773	0
[	**Bi**	**209**		ug/L			2594753	2501343	0
[	**Th**	**232**	**5.420**	ug/L	0.044	0	1408	248418	1
[	**U**	**238**	**0.510**	ug/L	0.002	0	31	24965	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:06:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	926834	1
[	Be	9	0.664	ug/L	0.028	4	23	2202	2
	C	13		ug/L			82469	114342	1
	Cl	37		ug/L			4833777	4705789	1
[>	Sc	45		ug/L			1144296	1243574	2
[	V	51	23.636	ug/L	0.724	3	9450	555023	1
[	V-1	51	23.592	ug/L	0.807	3	48	544978	1
[	Cr	52	20.893	ug/L	0.489	2	27897	432500	0
[	Cr	53	20.766	ug/L	0.794	3	145	45660	1
[	Mn	55	725.488	ug/L	28.932	3	487	19412395	1
[	Co	59	6.319	ug/L	0.185	2	76	124463	0
[>	Ge	72		ug/L			608948	591666	1
[	Ni	60	20.420	ug/L	0.353	1	28	78060	1
[	Ni	62	21.109	ug/L	0.481	2	64	11597	1
[	Cu	63	17.874	ug/L	0.394	2	101	155430	1
[	Cu	65	18.485	ug/L	0.301	1	39	70828	2
[	Zn	66	86.491	ug/L	2.168	2	991	193949	1
[	Zn	67	101.213	ug/L	1.547	1	141	37972	0
[	Zn	68	97.904	ug/L	1.734	1	706	155447	0
[	As	75	6.592	ug/L	0.147	2	318	13929	1
[	As-1	75	6.655	ug/L	0.228	3	12623	25669	0
[	Se	82	-0.235	ug/L	0.081	34	-10	-67	30
[	Se	78	0.040	ug/L	0.321	809	12864	12521	0
[	Mo	98	0.372	ug/L	0.007	1	28	2088	1
	Y	89		ug/L			406158	585475	2
	Kr	83		ug/L			794	1255	3
[>	In	115		ug/L			1093664	1080919	0
[	Ag	107	~0.140	ug/L	0.001	0	42	2152	0
[	Cd	111	0.727	ug/L	0.032	4	115	3959	4
[	Cd	114	0.575	ug/L	0.006	0	65	7555	1
[	Sb	121	0.052	ug/L	0.001	2	182	988	1
[	Sb	123	0.050	ug/L	0.004	7	151	742	5
[	Ba	135	315.156	ug/L	4.037	1	15	1500393	1
[	Ba	137	318.971	ug/L	2.159	0	26	2636638	0
[>	Tb	159		ug/L			1253683	1262444	0
[	Tl	205	0.133	ug/L	0.002	1	128	4830	1
[	Pb	208	31.354	ug/L	0.282	0	347	1442534	0
[	Bi	209		ug/L			2594753	2482401	0
[	Th	232	5.313	ug/L	0.027	0	1408	242985	0
[	U	238	1.098	ug/L	0.020	1	31	53591	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:10:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	925173	0
	Be	9	0.431	ug/L	0.006	1	23	1437	1
	C	13		ug/L			82469	112499	3
	Cl	37		ug/L			4833777	4721761	1
>	Sc	45		ug/L			1144296	1242547	2
	V	51	17.436	ug/L	0.439	2	9450	411863	1
	V-1	51	17.505	ug/L	0.268	1	48	404189	0
	Cr	52	11.874	ug/L	0.455	3	27897	258680	2
	Cr	53	12.151	ug/L	0.365	3	145	26776	3
	Mn	55	1082.556	ug/L	31.652	2	487	28951335	1
	Co	59	4.546	ug/L	0.094	2	76	89528	2
>	Ge	72		ug/L			608948	596517	0
	Ni	60	13.692	ug/L	0.162	1	28	52780	0
	Ni	62	14.879	ug/L	0.660	4	64	8259	3
	Cu	63	10.423	ug/L	0.146	1	101	91440	1
	Cu	65	10.819	ug/L	0.208	1	39	41802	1
	Zn	66	153.356	ug/L	3.439	2	991	345984	1
	Zn	67	165.252	ug/L	6.110	3	141	62420	3
	Zn	68	167.157	ug/L	1.880	1	706	267115	0
	As	75	6.125	ug/L	0.071	1	318	13071	0
	As-1	75	6.248	ug/L	0.134	2	12623	25056	0
	Se	82	-0.113	ug/L	0.119	104	-10	-37	77
	Se	78	0.122	ug/L	0.241	197	12864	12671	0
	Mo	98	0.339	ug/L	0.006	1	28	1923	1
	Y	89		ug/L			406158	494942	1
	Kr	83		ug/L			794	1041	7
>	In	115		ug/L			1093664	1085703	0
	Ag	107	0.139	ug/L	0.005	3	42	2146	3
	Cd	111	1.533	ug/L	0.036	2	115	8261	2
	Cd	114	1.378	ug/L	0.006	0	65	18095	0
	Sb	121	0.066	ug/L	0.003	4	182	1207	4
	Sb	123	0.064	ug/L	0.002	2	151	905	1
	Ba	135	438.261	ug/L	2.473	0	15	2095721	0
	Ba	137	430.365	ug/L	4.083	0	26	3573158	0
>	Tb	159		ug/L			1253683	1269680	1
	Tl	205	0.141	ug/L	0.004	2	128	5114	1
	Pb	208	65.133	ug/L	0.646	0	347	3013364	0
	Bi	209		ug/L			2594753	2508843	0
	Th	232	3.504	ug/L	0.026	0	1408	161657	0
	U	238	0.424	ug/L	0.001	0	31	20836	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:15:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	940258	2
[	Be	9	0.877	ug/L	0.028	3	23	2943	0
	C	13		ug/L			82469	116382	1
	Cl	37		ug/L			4833777	4938150	4
[>	Sc	45		ug/L			1144296	1296583	1
[	V	51	35.394	ug/L	0.673	1	9450	861408	0
[	V-1	51	35.355	ug/L	0.759	2	48	851697	0
[	Cr	52	62.467	ug/L	1.077	1	27897	1285545	0
[	Cr	53	62.130	ug/L	1.357	2	145	142161	0
[	Mn	55	1325.853	ug/L	28.346	2	487	37004486	0
[	Co	59	10.899	ug/L	0.288	2	76	223781	0
[>	Ge	72		ug/L			608948	581140	3
[	Ni	60	61.321	ug/L	1.737	2	28	230091	1
[	Ni	62	63.460	ug/L	1.996	3	64	34104	0
[	Cu	63	22.902	ug/L	1.043	4	101	195449	2
[	Cu	65	23.943	ug/L	1.240	5	39	89998	2
[	Zn	66	293.780	ug/L	9.593	3	991	644539	1
[	Zn	67	292.864	ug/L	8.309	2	141	107616	0
[	Zn	68	309.890	ug/L	10.088	3	706	481562	0
[	As	75	15.837	ug/L	0.563	3	318	32424	0
[	As-1	75	16.226	ug/L	0.753	4	12623	44127	0
[	Se	82	-0.301	ug/L	0.105	34	-10	-81	27
[	Se	78	0.298	ug/L	0.591	198	12864	12438	0
[	Mo	98	0.513	ug/L	0.032	6	28	2818	2
	Y	89		ug/L			406158	528535	2
	Kr	83		ug/L			794	1243	2
[>	In	115		ug/L			1093664	1079913	0
[	Ag	107	~0.176	ug/L	0.002	1	42	2691	1
[	Cd	111	4.053	ug/L	0.040	0	115	21542	0
[	Cd	114	4.022	ug/L	0.036	0	65	52401	0
[	Sb	121	0.063	ug/L	0.004	5	182	1162	5
[	Sb	123	0.058	ug/L	0.001	1	151	829	1
[	Ba	135	475.933	ug/L	3.456	0	15	2263756	0
[	Ba	137	469.695	ug/L	5.938	1	26	3878799	0
[>	Tb	159		ug/L			1253683	1279194	1
[	Tl	205	0.237	ug/L	0.005	2	128	8587	1
[	Pb	208	182.371	ug/L	4.042	2	347	8499311	1
[	Bi	209		ug/L			2594753	2461397	0
[	Th	232	5.528	ug/L	0.059	1	1408	256097	0
[	U	238	0.540	ug/L	0.008	1	31	26701	1

ICP-MS Quantitative Analysis - Summary Report

Ag

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:20:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	930980	1
[	Be	9	0.443	ug/L	0.024	5	23	1483	5
	C	13		ug/L			82469	117135	1
	Cl	37		ug/L			4833777	4780410	2
[>	Sc	45		ug/L			1144296	1248512	1
[	V	51	18.670	ug/L	0.126	0	9450	442492	0
[	V-1	51	18.684	ug/L	0.181	0	48	433511	0
[	Cr	52	12.557	ug/L	0.243	1	27897	273169	1
[	Cr	53	12.649	ug/L	0.370	2	145	27995	1
[	Mn	55	1050.565	ug/L	10.199	0	487	28241147	1
[	Co	59	4.867	ug/L	0.042	0	76	96303	0
[>	Ge	72		ug/L			608948	595551	2
[	Ni	60	11.881	ug/L	0.546	4	28	45696	2
[	Ni	62	12.485	ug/L	0.488	3	64	6929	4
[	Cu	63	10.629	ug/L	0.424	3	101	93028	1
[	Cu	65	10.890	ug/L	0.415	3	39	41985	1
[	Zn	66	133.508	ug/L	4.338	3	991	300716	1
[	Zn	67	140.029	ug/L	2.809	2	141	52814	0
[	Zn	68	144.108	ug/L	6.284	4	706	229842	1
[	As	75	12.988	ug/L	0.349	2	318	27315	0
[	As-1	75	13.267	ug/L	0.510	3	12623	39233	0
[	Se	82	-0.040	ug/L	0.069	174	-10	-19	88
[	Se	78	0.113	ug/L	0.634	561	12864	12640	0
[	Mo	98	0.468	ug/L	0.011	2	28	2636	1
	Y	89		ug/L			406158	506595	0
	Kr	83		ug/L			794	1030	4
[>	In	115		ug/L			1093664	1072882	0
[	Ag	107	~0.093	ug/L	0.003	2	42	1436	2
[	Cd	111	1.722	ug/L	0.070	4	115	9157	3
[	Cd	114	1.649	ug/L	0.022	1	65	21375	0
[	Sb	121	0.114	ug/L	0.005	4	182	1935	3
[	Sb	123	0.119	ug/L	0.002	1	151	1537	0
[	Ba	135	301.872	ug/L	4.336	1	15	1426455	1
[	Ba	137	308.555	ug/L	6.128	1	26	2531541	1
[>	Tb	159		ug/L			1253683	1265882	0
[	Tl	205	0.151	ug/L	0.007	4	128	5449	4
[	Pb	208	75.513	ug/L	1.515	2	347	3482972	1
[	Bi	209		ug/L			2594753	2515010	0
[	Th	232	4.757	ug/L	0.116	2	1408	218253	1
[	U	238	0.599	ug/L	0.009	1	31	29308	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:24:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	914773	1
	Be	9	0.516	ug/L	0.005	0	23	1695	0
	C	13		ug/L			82469	110315	1
	Cl	37		ug/L			4833777	4707910	2
>	Sc	45		ug/L			1144296	1251794	0
	V	51	22.392	ug/L	0.757	3	9450	530011	2
	V-1	51	22.470	ug/L	0.793	3	48	522696	3
	Cr	52	15.738	ug/L	0.469	2	27897	335593	2
	Cr	53	16.050	ug/L	0.181	1	145	35582	0
	Mn	55	700.698	ug/L	16.476	2	487	18884998	2
	Co	59	5.178	ug/L	0.100	1	76	102735	2
>	Ge	72		ug/L			608948	596075	2
	Ni	60	13.771	ug/L	0.530	3	28	53020	2
	Ni	62	15.404	ug/L	0.357	2	64	8541	1
	Cu	63	11.081	ug/L	0.325	2	101	97084	1
	Cu	65	11.424	ug/L	0.335	2	39	44088	0
	Zn	66	88.046	ug/L	3.648	4	991	198815	2
	Zn	67	96.905	ug/L	2.905	2	141	36622	1
	Zn	68	93.938	ug/L	3.139	3	706	150230	1
	As	75	7.323	ug/L	0.226	3	318	15549	1
	As-1	75	7.433	ug/L	0.347	4	12623	27434	0
	Se	82	-0.101	ug/L	0.063	62	-10	-35	46
	Se	78	0.056	ug/L	0.478	860	12864	12620	0
	Mo	98	0.399	ug/L	0.023	5	28	2255	3
	Y	89		ug/L			406158	553312	2
	Kr	83		ug/L			794	1095	4
>	In	115		ug/L			1093664	1079361	0
	Ag	107	~0.087	ug/L	0.007	8	42	1342	8
	Cd	111	0.741	ug/L	0.013	1	115	4031	1
	Cd	114	0.609	ug/L	0.005	0	65	7985	0
	Sb	121	0.053	ug/L	0.003	5	182	996	4
	Sb	123	0.050	ug/L	0.002	3	151	740	3
	Ba	135	215.972	ug/L	0.879	0	15	1026743	0
	Ba	137	218.583	ug/L	3.201	1	26	1804189	1
>	Tb	159		ug/L			1253683	1256254	1
	Tl	205	0.137	ug/L	0.003	1	128	4933	0
	Pb	208	52.268	ug/L	1.120	2	347	2392495	1
	Bi	209		ug/L			2594753	2507564	0
	Th	232	4.967	ug/L	0.108	2	1408	226061	0
	U	238	0.756	ug/L	0.016	2	31	36744	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 15:28:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	908770 ✓	0
[	Be	9	49.177	ug/L	1.201	2	23	158275	1
	C	13		ug/L			82469	85898	1
	Cl	37		ug/L			4833777	4938363	3
[>	Sc	45		ug/L			1144296	1134662 ✓	0
[	V	51	49.037	ug/L	0.707	1	9450	1041113	2
[	V-1	51	49.215	ug/L	0.786	1	48	1037864	2
[	Cr	52	49.721	ug/L	0.255	0	27897	901276	0
[	Cr	53	50.316	ug/L	0.250	0	145	100805	0
[	Mn	55	48.686	ug/L	0.161	0	487	1189889	0
[	Co	59	50.569	ug/L	0.676	1	76	908702	1
[>	Ge	72		ug/L			608948	588907 ✓	1
[	Ni	60	50.476	ug/L	0.238	0	28	192033	1
[	Ni	62	48.361	ug/L	1.933	3	64	26358	2
[	Cu	63	49.095	ug/L	0.827	1	101	424876	2
[	Cu	65	50.236	ug/L	0.427	0	39	191487	0
[	Zn	66	49.577	ug/L	0.468	0	991	111074	0
[	Zn	67	49.052	ug/L	0.547	1	141	18387	0
[	Zn	68	50.639	ug/L	1.861	3	706	80338	2
[	As	75	50.444	ug/L	0.461	0	318	104053	0
[	As-1	75	50.375	ug/L	0.874	1	12623	113215	0
[	Se	82	49.751	ug/L	0.720	1	-10	12142	2
[	Se	78	49.498	ug/L	0.911	1	12864	40616	0
[	Mo	98	48.917	ug/L	1.352	2	28	269869	2
	Y	89		ug/L			406158	389398	0
	Kr	83		ug/L			794	820	2
[>	In	115		ug/L			1093664	1058729 ✓	1
[	Ag	107	48.955	ug/L	0.585	1	42	721120	2
[	Cd	111	50.691	ug/L	0.297	0	115	262847	0
[	Cd	114	50.980	ug/L	0.127	0	65	650353	0
[	Sb	121	50.830	ug/L	0.458	0	182	772058	0
[	Sb	123	49.902	ug/L	0.385	0	151	575324	1
[	Ba	135	50.387	ug/L	0.153	0	15	234968	0
[	Ba	137	50.180	ug/L	0.434	0	26	406289	1
[>	Tb	159		ug/L			1253683	1236364 ✓	1
[	Tl	205	49.196	ug/L	0.123	0	128	1697326	0
[	Pb	208	49.540	ug/L	0.592	1	347	2231992	1
[	Bi	209		ug/L			2594753	2474648	0
[	Th	232	51.496	ug/L	0.499	0	1408	2294088	0
[	U	238	51.401	ug/L	0.621	1	31	2455569	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 15:35:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	876656	1
[	Be	9	-0.001	ug/L	0.002	191	23	19	32
	C	13		ug/L			82469	82075	0
	Cl	37		ug/L			4833777	4799670	1
[>	Sc	45		ug/L			1144296	1093771	3
[	V	51	0.019	ug/L	0.018	97	9450	9409	0
[	V-1	51	0.001	ug/L	0.001	52	48	70	17
[	Cr	52	0.069	ug/L	0.065	93	27897	27818	0
[	Cr	53	0.009	ug/L	0.003	34	145	157	1
[	Mn	55	0.006	ug/L	0.002	29	487	599	9
[	Co	59	0.000	ug/L	0.000	109	76	80	7
[>	Ge	72		ug/L			608948	565743	0
[	Ni	60	0.003	ug/L	0.002	71	28	38	21
[	Ni	62	0.001	ug/L	0.018	1804	64	60	15
[	Cu	63	0.008	ug/L	0.002	21	101	162	9
[	Cu	65	0.008	ug/L	0.002	24	39	65	10
[	Zn	66	-0.168	ug/L	0.009	5	991	561	3
[	Zn	67	-0.108	ug/L	0.040	36	141	93	15
[	Zn	68	-0.129	ug/L	0.008	5	706	461	1
[	As	75	0.021	ug/L	0.009	42	318	336	4
[	As-1	75	0.219	ug/L	0.025	11	12623	12148	0
[	Se	82	0.032	ug/L	0.075	231	-10	-1	913
[	Se	78	0.743	ug/L	0.064	8	12864	12358	0
[	Mo	98	0.004	ug/L	0.001	28	28	49	12
	Y	89		ug/L			406158	376293	2
	Kr	83		ug/L			794	748	3
[>	In	115		ug/L			1093664	1026642	0
[	Ag	107	-0.000	ug/L	0.000	58	42	34	10
[	Cd	111	-0.002	ug/L	0.002	83	115	96	9
[	Cd	114	-0.001	ug/L	0.000	23	65	51	4
[	Sb	121	0.045	ug/L	0.005	10	182	835	8
[	Sb	123	0.043	ug/L	0.004	8	151	628	7
[	Ba	135	0.006	ug/L	0.001	15	15	42	10
[	Ba	137	0.004	ug/L	0.001	26	26	52	14
[>	Tb	159		ug/L			1253683	1167892	0
[	Tl	205	0.008	ug/L	0.004	55	128	376	37
[	Pb	208	0.000	ug/L	0.001	571	347	330	10
[	Bi	209		ug/L			2594753	2451410	0
[	Th	232	0.057	ug/L	0.001	2	1408	3711	1
[	U	238	0.001	ug/L	0.000	5	31	86	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:41:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	899958	0
	Be	9	-0.002	ug/L	0.003	148	23	17	49
	C	13		ug/L			82469	88433	1
	Cl	37		ug/L			4833777	4711070	1
>	Sc	45		ug/L			1144296	1134692	2
	V	51	0.008	ug/L	0.008	98	9450	9543	1
	V-1	51	0.002	ug/L	0.001	33	48	96	14
	Cr	52	0.029	ug/L	0.031	107	27897	28164	0
	Cr	53	0.009	ug/L	0.008	88	145	161	7
	Mn	55	0.032	ug/L	0.014	43	487	1254	24
	Co	59	0.002	ug/L	0.001	43	76	103	10
>	Ge	72		ug/L			608948	572520	0
	Ni	60	0.004	ug/L	0.002	59	28	41	20
	Ni	62	0.004	ug/L	0.035	862	64	62	29
	Cu	63	0.031	ug/L	0.004	12	101	353	9
	Cu	65	0.027	ug/L	0.002	7	39	137	5
	Zn	66	-0.068	ug/L	0.017	24	991	785	5
	Zn	67	-0.012	ug/L	0.012	101	141	129	2
	Zn	68	-0.049	ug/L	0.020	41	706	589	4
	As	75	0.023	ug/L	0.017	73	318	344	9
	As-1	75	0.227	ug/L	0.111	48	12623	12308	1
	Se	82	0.046	ug/L	0.060	129	-10	1	1039
	Se	78	0.787	ug/L	0.427	54	12864	12529	1
	Mo	98	0.001	ug/L	0.001	78	28	31	10
	Y	89		ug/L			406158	377789	1
	Kr	83		ug/L			794	763	3
>	In	115		ug/L			1093664	1052997	0
	Ag	107	-0.000	ug/L	0.000	148	42	37	15
	Cd	111	-0.002	ug/L	0.001	63	115	102	6
	Cd	114	-0.000	ug/L	0.000	133	65	60	4
	Sb	121	0.008	ug/L	0.001	16	182	303	6
	Sb	123	0.006	ug/L	0.003	48	151	218	15
	Ba	135	0.014	ug/L	0.003	22	15	80	19
	Ba	137	0.012	ug/L	0.003	24	26	124	19
>	Tb	159		ug/L			1253683	1188271	0
	Tl	205	0.005	ug/L	0.002	46	128	285	26
	Pb	208	0.008	ug/L	0.001	12	347	660	6
	Bi	209		ug/L			2594753	2463639	0
	Th	232	0.034	ug/L	0.006	17	1408	2784	9
	U	238	0.000	ug/L	0.000	79	31	41	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:45:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	883627	0
[	Be	9	24.551	ug/L	0.023	0	23	76850	0
	C	13		ug/L			82469	86990	1
	Cl	37		ug/L			4833777	4846774	2
[>	Sc	45		ug/L			1144296	1125303	2
[	V	51	25.100	ug/L	0.930	3	9450	532699	1
[	V-1	51	25.032	ug/L	0.786	3	48	523266	0
[	Cr	52	25.737	ug/L	1.397	5	27897	475519	2
[	Cr	53	25.504	ug/L	0.887	3	145	50717	1
[	Mn	55	25.283	ug/L	0.350	1	487	612915	1
[	Co	59	25.772	ug/L	1.168	4	76	459012	2
[>	Ge	72		ug/L			608948	577142	0
[	Ni	60	26.155	ug/L	0.322	1	28	97532	1
[	Ni	62	25.458	ug/L	0.612	2	64	13631	1
[	Cu	63	26.734	ug/L	0.267	0	101	226750	0
[	Cu	65	26.691	ug/L	0.536	2	39	99738	2
[	Zn	66	82.471	ug/L	1.344	1	991	180485	2
[	Zn	67	76.240	ug/L	1.168	1	141	27938	1
[	Zn	68	80.256	ug/L	1.315	1	706	124444	2
[	As	75	27.049	ug/L	0.681	2	318	54820	1
[	As-1	75	25.836	ug/L	0.184	0	12623	62742	0
[	Se	82	79.281	ug/L	1.815	2	-10	18964	1
[	Se	78	79.766	ug/L	0.669	0	12864	56699	1
[	Mo	98	24.276	ug/L	0.446	1	28	131269	1
	Y	89		ug/L			406158	384734	1
	Kr	83		ug/L			794	809	2
[>	In	115		ug/L			1093664	1056027	1
[	Ag	107	25.435	ug/L	0.705	2	42	373620	1
[	Cd	111	24.895	ug/L	0.303	1	115	128806	0
[	Cd	114	25.128	ug/L	0.333	1	65	319743	0
[	Sb	121	24.896	ug/L	0.278	1	182	377261	0
[	Sb	123	24.890	ug/L	0.580	2	151	286242	1
[	Ba	135	25.580	ug/L	0.263	1	15	118983	1
[	Ba	137	25.413	ug/L	0.148	0	26	205244	1
[>	Tb	159		ug/L			1253683	1197166	0
[	Tl	205	26.276	ug/L	0.081	0	128	877876	0
[	Pb	208	26.250	ug/L	0.020	0	347	1145388	0
[	Bi	209		ug/L			2594753	2508446	0
[	Th	232	25.606	ug/L	0.297	1	1408	1105310	1
[	U	238	25.683	ug/L	0.218	0	31	1188152	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:49:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	916718	0
	Be	9	0.478	ug/L	0.037	7	23	1574	6
	C	13		ug/L			82469	114617	1
	Cl	37		ug/L			4833777	4640620	3
>	Sc	45		ug/L			1144296	1226137	3
	V	51	20.301	ug/L	0.929	4	9450	471240	2
	V-1	51	20.392	ug/L	0.978	4	48	464260	2
	Cr	52	13.479	ug/L	0.345	2	27897	285671	1
	Cr	53	13.837	ug/L	0.505	3	145	30048	2
	Mn	55	860.529	ug/L	23.120	2	487	22706077	1
	Co	59	4.690	ug/L	0.150	3	76	91071	0
>	Ge	72		ug/L			608948	601099	1
	Ni	60	12.369	ug/L	0.533	4	28	48024	2
	Ni	62	13.328	ug/L	0.241	1	64	7461	0
	Cu	63	9.841	ug/L	0.523	5	101	86938	3
	Cu	65	10.035	ug/L	0.161	1	39	39072	1
	Zn	66	60.525	ug/L	1.269	2	991	138175	1
	Zn	67	74.757	ug/L	1.318	1	141	28531	2
	Zn	68	70.118	ug/L	2.712	3	706	113261	1
	As	75	4.554	ug/L	0.213	4	318	9869	2
	As-1	75	4.513	ug/L	0.278	6	12623	21691	0
	Se	82	-0.065	ug/L	0.087	134	-10	-26	84
	Se	78	-0.197	ug/L	0.356	180	12864	12582	1
	Mo	98	0.396	ug/L	0.016	4	28	2254	2
	Y	89		ug/L			406158	516961	0
	Kr	83		ug/L			794	1097	4
>	In	115		ug/L			1093664	1077964	1
	Ag	107	~0.095	ug/L	0.004	3	42	1469	3
	Cd	111	0.573	ug/L	0.021	3	115	3136	4
	Cd	114	0.415	ug/L	0.008	1	65	5451	0
	Sb	121	0.082	ug/L	0.003	3	182	1453	1
	Sb	123	0.085	ug/L	0.009	10	151	1152	7
	Ba	135	241.892	ug/L	6.177	2	15	1148255	1
	Ba	137	239.592	ug/L	4.402	1	26	1974816	0
>	Tb	159		ug/L			1253683	1273472	0
	Tl	205	0.106	ug/L	0.002	1	128	3910	0
	Pb	208	21.642	ug/L	0.366	1	347	1004463	0
	Bi	209		ug/L			2594753	2499345	1
	Th	232	4.402	ug/L	0.064	1	1408	203291	0
	U	238	0.736	ug/L	0.027	3	31	36263	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:53:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	920441	1
	Be	9	0.489	ug/L	0.009	1	23	1616	0
	C	13		ug/L			82469	103475	3
	Cl	37		ug/L			4833777	4614911	3
>	Sc	45		ug/L			1144296	1223341	1
	V	51	21.075	ug/L	0.114	0	9450	488167	2
	V-1	51	21.151	ug/L	0.037	0	48	480890	1
	Cr	52	13.910	ug/L	0.134	0	27897	293308	1
	Cr	53	14.219	ug/L	0.431	3	145	30816	1
	Mn	55	289.740	ug/L	6.172	2	487	7630564	0
	Co	59	4.929	ug/L	0.098	1	76	95539	0
>	Ge	72		ug/L			608948	596701	0
	Ni	60	12.341	ug/L	0.118	0	28	47592	0
	Ni	62	13.457	ug/L	0.117	0	64	7480	0
	Cu	63	11.531	ug/L	0.277	2	101	101173	2
	Cu	65	12.039	ug/L	0.133	1	39	46529	1
	Zn	66	42.545	ug/L	0.592	1	991	96730	1
	Zn	67	52.668	ug/L	0.038	0	141	19996	0
	Zn	68	47.658	ug/L	0.239	0	706	76678	0
	As	75	3.138	ug/L	0.041	1	318	6852	1
	As-1	75	3.101	ug/L	0.023	0	12623	18670	0
	Se	82	-0.052	ug/L	0.073	138	-10	-22	78
	Se	78	-0.032	ug/L	0.152	482	12864	12588	0
	Mo	98	0.277	ug/L	0.009	3	28	1579	2
	Y	89		ug/L			406158	527808	1
	Kr	83		ug/L			794	1099	2
>	In	115		ug/L			1093664	1054317	0
	Ag	107	~0.125	ug/L	0.003	2	42	1872	2
	Cd	111	0.382	ug/L	0.029	7	115	2081	7
	Cd	114	0.200	ug/L	0.003	1	65	2609	1
	Sb	121	0.041	ug/L	0.002	6	182	793	4
	Sb	123	0.043	ug/L	0.003	6	151	635	4
	Ba	135	148.150	ug/L	0.465	0	15	687974	0
	Ba	137	147.785	ug/L	1.661	1	26	1191543	1
>	Tb	159		ug/L			1253683	1253978	0
	Tl	205	0.091	ug/L	0.002	2	128	3329	2
	Pb	208	8.806	ug/L	0.125	1	347	402668	0
	Bi	209		ug/L			2594753	2478043	1
	Th	232	4.595	ug/L	0.044	0	1408	208893	0
	U	238	0.864	ug/L	0.015	1	31	41901	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 15:57:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	933541	2
[	Be	9	0.415	ug/L	0.006	1	23	1395	3
	C	13		ug/L			82469	100862	3
	Cl	37		ug/L			4833777	4764082	2
[>	Sc	45		ug/L			1144296	1213594	2
|	V	51	23.279	ug/L	0.477	2	9450	533728	1
|	V-1	51	23.283	ug/L	0.512	2	48	525017	1
|	Cr	52	15.257	ug/L	0.173	1	27897	316308	2
|	Cr	53	15.331	ug/L	0.067	0	145	32957	1
|	Mn	55	276.941	ug/L	3.469	1	487	7236594	2
[	Co	59	5.091	ug/L	0.112	2	76	97909	3
[>	Ge	72		ug/L			608948	592665	2
|	Ni	60	12.916	ug/L	0.366	2	28	49451	0
|	Ni	62	13.842	ug/L	0.622	4	64	7635	2
|	Cu	63	11.290	ug/L	0.225	1	101	98374	1
|	Cu	65	11.471	ug/L	0.326	2	39	44018	0
|	Zn	66	39.534	ug/L	0.557	1	991	89325	0
|	Zn	67	45.871	ug/L	1.208	2	141	17312	2
|	Zn	68	43.382	ug/L	0.647	1	706	69376	1
|	As	75	3.471	ug/L	0.014	0	318	7494	1
|	As-1	75	3.521	ug/L	0.134	3	12623	19388	0
|	Se	82	-0.083	ug/L	0.065	78	-10	-30	50
|	Se	78	0.205	ug/L	0.408	199	12864	12634	0
[	Mo	98	0.317	ug/L	0.004	1	28	1787	1
	Y	89		ug/L			406158	520504	0
	Kr	83		ug/L			794	1084	2
[>	In	115		ug/L			1093664	1069948	1
|	Ag	107	0.094	ug/L	0.005	5	42	1438	4
|	Cd	111	0.288	ug/L	0.019	6	115	1621	7
|	Cd	114	0.127	ug/L	0.002	1	65	1695	1
|	Sb	121	0.018	ug/L	0.001	5	182	458	1
|	Sb	123	0.016	ug/L	0.002	9	151	333	6
|	Ba	135	105.794	ug/L	1.314	1	15	498559	1
[	Ba	137	104.961	ug/L	0.564	0	26	858787	0
[>	Tb	159		ug/L			1253683	1250465	0
|	Tl	205	0.081	ug/L	0.001	1	128	2949	2
|	Pb	208	8.493	ug/L	0.112	1	347	387285	0
|	Bi	209		ug/L			2594753	2468522	1
|	Th	232	5.550	ug/L	0.078	1	1408	251331	0
[	U	238	0.798	ug/L	0.006	0	31	38570	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:01:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	927709	1
[	Be	9	0.390	ug/L	0.015	3	23	1304	4
	C	13		ug/L			82469	112987	1
	Cl	37		ug/L			4833777	4764523	3
[>	Sc	45		ug/L			1144296	1228678	0
[	V	51	18.991	ug/L	0.096	0	9450	442792	0
[	V-1	51	19.033	ug/L	0.145	0	48	434635	0
[	Cr	52	20.374	ug/L	0.122	0	27897	417589	0
[	Cr	53	20.507	ug/L	0.301	1	145	44578	1
[	Mn	55	643.559	ug/L	6.121	0	487	17025020	0
[	Co	59	5.496	ug/L	0.191	3	76	107000	3
[>	Ge	72		ug/L			608948	595704	1
[	Ni	60	14.066	ug/L	0.448	3	28	54142	2
[	Ni	62	14.767	ug/L	0.486	3	64	8185	2
[	Cu	63	14.395	ug/L	0.352	2	101	126046	1
[	Cu	65	14.712	ug/L	0.401	2	39	56745	1
[	Zn	66	142.425	ug/L	1.962	1	991	320952	0
[	Zn	67	143.797	ug/L	4.301	2	141	54253	2
[	Zn	68	151.811	ug/L	5.794	3	706	242250	2
[	As	75	8.182	ug/L	0.178	2	318	17331	0
[	As-1	75	8.241	ug/L	0.227	2	12623	29062	0
[	Se	82	0.010	ug/L	0.046	478	-10	-7	151
[	Se	78	-0.154	ug/L	0.187	121	12864	12495	0
[	Mo	98	0.338	ug/L	0.011	3	28	1917	4
	Y	89		ug/L			406158	519200	0
	Kr	83		ug/L			794	1041	1
[>	In	115		ug/L			1093664	1086133	1
[	Ag	107	0.090	ug/L	0.004	4	42	1398	3
[	Cd	111	2.287	ug/L	0.054	2	115	12271	1
[	Cd	114	2.200	ug/L	0.039	1	65	28845	1
[	Sb	121	0.134	ug/L	0.004	2	182	2272	1
[	Sb	123	0.134	ug/L	0.002	1	151	1738	0
[	Ba	135	268.392	ug/L	1.752	0	15	1283878	0
[	Ba	137	274.410	ug/L	5.533	2	26	2278874	0
[>	Tb	159		ug/L			1253683	1264925	1
[	Tl	205	0.124	ug/L	0.002	2	128	4497	2
[	Pb	208	101.925	ug/L	1.514	1	347	4697453	0
[	Bi	209		ug/L			2594753	2501859	0
[	Th	232	4.709	ug/L	0.060	1	1408	215906	0
[	U	238	0.494	ug/L	0.007	1	31	24199	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 16:07:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			923208	906886	1
[	**Be**	**9**	**0.183**	ug/L	0.007	3	23	610	2
	C	**13**		ug/L			82469	100521	3
	Cl	**37**		ug/L			4833777	4844027	3
[>	**Sc**	**45**		ug/L			1144296	1185910	1
[	**V**	**51**	**7.359**	ug/L	0.190	2	9450	171575	1
[	**V-1**	**51**	**7.253**	ug/L	0.119	1	48	159876	0
[	**Cr**	**52**	**18.977**	ug/L	0.676	3	27897	377284	1
[	**Cr**	**53**	**18.532**	ug/L	0.463	2	145	38891	1
[	**Mn**	**55**	**531.699**	ug/L	8.572	1	487	13575654	1
[	**Co**	**59**	**4.494**	ug/L	0.128	2	76	84458	1
[>	**Ge**	**72**		ug/L			608948	586038	0
[	**Ni**	**60**	**16.468**	ug/L	0.154	0	28	62362	0
[	**Ni**	**62**	**16.722**	ug/L	0.418	2	64	9113	2
[	**Cu**	**63**	**10.668**	ug/L	0.131	1	101	91936	1
[	**Cu**	**65**	**10.842**	ug/L	0.121	1	39	41158	1
[	**Zn**	**66**	**147.498**	ug/L	4.269	2	991	326995	2
[	**Zn**	**67**	**142.459**	ug/L	2.771	1	141	52887	1
[	**Zn**	**68**	**150.863**	ug/L	3.439	2	706	236926	2
[	**As**	**75**	**3.815**	ug/L	0.029	0	318	8115	0
[	**As-1**	**75**	**3.923**	ug/L	0.057	1	12623	19977	0
[	**Se**	**82**	**0.092**	ug/L	0.041	44	-10	12	79
[	**Se**	**78**	**0.208**	ug/L	0.188	90	12864	12498	0
[	**Mo**	**98**	**0.155**	ug/L	0.003	2	28	881	2
	Y	**89**		ug/L			406158	445454	1
	Kr	**83**		ug/L			794	815	2
[>	**In**	**115**		ug/L			1093664	1101014	0
[	**Ag**	**107**	**0.062**	ug/L	0.002	2	42	989	3
[	**Cd**	**111**	**2.568**	ug/L	0.045	1	115	13955	1
[	**Cd**	**114**	**2.491**	ug/L	0.050	1	65	33106	1
[	**Sb**	**121**	**0.044**	ug/L	0.004	7	182	886	5
[	**Sb**	**123**	**0.042**	ug/L	0.001	2	151	655	1
[	**Ba**	**135**	**188.786**	ug/L	0.952	0	15	915480	0
[	**Ba**	**137**	**187.909**	ug/L	1.153	0	26	1582177	1
[>	**Tb**	**159**		ug/L			1253683	1239269	1
[	**Tl**	**205**	**0.131**	ug/L	0.002	1	128	4661	0
[	**Pb**	**208**	**110.543**	ug/L	0.922	0	347	4991652	1
[	**Bi**	**209**		ug/L			2594753	2531448	0
[	**Th**	**232**	**1.406**	ug/L	0.016	1	1408	64126	1
[	**U**	**238**	**0.178**	ug/L	0.002	1	31	8554	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:11:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			923208	909417	1
[	**Be**	**9**	**0.832**	ug/L	0.016	1	23	2704	3
	C	**13**		ug/L			82469	148394	1
	Cl	**37**		ug/L			4833777	5123734	1
[>	**Sc**	**45**		ug/L			1144296	1281224	1
[	**V**	**51**	**31.917**	ug/L	0.798	2	9450	768735	2
[	**V-1**	**51**	**31.727**	ug/L	0.429	1	48	755497	2
[	**Cr**	**52**	**83.023**	ug/L	1.094	1	27897	1678197	0
[	**Cr**	**53**	**81.997**	ug/L	1.529	1	145	185402	2
[	**Mn**	**55**	**2312.041**	ug/L	42.127	1	487	63771132	1
[	**Co**	**59**	**19.372**	ug/L	0.581	2	76	393121	3
[>	**Ge**	**72**		ug/L			608948	585389	1
[	**Ni**	**60**	**76.083**	ug/L	0.520	0	28	287712	1
[	**Ni**	**62**	**77.601**	ug/L	2.140	2	64	42012	1
[	**Cu**	**63**	**47.863**	ug/L	1.363	2	101	411675	2
[	**Cu**	**65**	**48.629**	ug/L	1.190	2	39	184280	2
[	**Zn**	**66**	**648.708**	ug/L	19.953	3	991	1432946	1
[	**Zn**	**67**	**636.379**	ug/L	15.641	2	141	235496	1
[	**Zn**	**68**	**686.783**	ug/L	19.863	2	706	1074661	1
[	**As**	**75**	**17.390**	ug/L	0.433	2	318	35852	1
[	**As-1**	**75**	**17.668**	ug/L	0.531	3	12623	47345	0
[	**Se**	**82**	**0.168**	ug/L	0.049	29	-10	31	38
[	**Se**	**78**	**0.147**	ug/L	0.346	234	12864	12448	0
[	**Mo**	**98**	**0.714**	ug/L	0.013	1	28	3944	3
	Y	**89**		ug/L			406158	611038	1
	Kr	**83**		ug/L			794	1158	2
[>	**In**	**115**		ug/L			1093664	1104588	1
[	**Ag**	**107**	**0.270**	ug/L	0.004	1	42	4194	0
[	**Cd**	**111**	**11.228**	ug/L	0.163	1	115	60834	1
[	**Cd**	**114**	**11.195**	ug/L	0.191	1	65	149040	0
[	**Sb**	**121**	**0.215**	ug/L	0.006	2	182	3585	2
[	**Sb**	**123**	**0.207**	ug/L	0.001	0	151	2647	1
[	**Ba**	**135**	**897.432**	ug/L	13.013	1	15	4365768	1
[	**Ba**	**137**	**886.601**	ug/L	10.040	1	26	7488478	0
[>	**Tb**	**159**		ug/L			1253683	1258545	0
[	**Tl**	**205**	**0.614**	ug/L	0.011	1	128	21693	1
[	**Pb**	**208**	**512.663**	ug/L	5.144	1	347	23508449	0
[	**Bi**	**209**		ug/L			2594753	2430312	0
[	**Th**	**232**	**6.397**	ug/L	0.023	0	1408	291352	0
[	**U**	**238**	**0.817**	ug/L	0.008	0	31	39765	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 16:15:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	917752	0
	Be	9	0.176	ug/L	0.013	7	23	594	7
	C	13		ug/L			82469	97876	3
	Cl	37		ug/L			4833777	4885750	0
>	Sc	45		ug/L			1144296	1181392	0
	V	51	7.557	ug/L	0.026	0	9450	175302	0
	V-1	51	7.613	ug/L	0.048	0	48	167193	0
	Cr	52	21.482	ug/L	0.135	0	27897	421792	0
	Cr	53	21.565	ug/L	0.330	1	145	45069	1
	Mn	55	360.287	ug/L	1.226	0	487	9164930	0
	Co	59	4.456	ug/L	0.071	1	76	83432	1
>	Ge	72		ug/L			608948	594744	2
	Ni	60	19.347	ug/L	0.412	2	28	74334	1
	Ni	62	19.641	ug/L	0.820	4	64	10850	3
	Cu	63	8.924	ug/L	0.214	2	101	78043	1
	Cu	65	9.167	ug/L	0.275	2	39	35312	2
	Zn	66	96.045	ug/L	1.968	2	991	216373	0
	Zn	67	97.557	ug/L	4.953	5	141	36779	3
	Zn	68	100.375	ug/L	2.857	2	706	160144	1
	As	75	3.424	ug/L	0.039	1	318	7422	1
	As-1	75	3.431	ug/L	0.233	6	12623	19272	0
	Se	82	0.049	ug/L	0.068	137	-10	2	719
	Se	78	-0.117	ug/L	0.668	572	12864	12492	1
	Mo	98	0.142	ug/L	0.001	0	28	817	2
	Y	89		ug/L			406158	441118	3
	Kr	83		ug/L			794	856	0
>	In	115		ug/L			1093664	1084684	1
	Ag	107	0.059	ug/L	0.002	3	42	935	2
	Cd	111	1.478	ug/L	0.045	3	115	7961	1
	Cd	114	1.432	ug/L	0.039	2	65	18775	1
	Sb	121	0.015	ug/L	0.001	5	182	413	1
	Sb	123	0.015	ug/L	0.002	12	151	326	5
	Ba	135	157.830	ug/L	3.522	2	15	753851	0
	Ba	137	157.037	ug/L	2.737	1	26	1302378	0
>	Tb	159		ug/L			1253683	1229351	0
	Tl	205	0.105	ug/L	0.003	2	128	3715	1
	Pb	208	71.243	ug/L	0.529	0	347	3191486	0
	Bi	209		ug/L			2594753	2497975	1
	Th	232	1.291	ug/L	0.011	0	1408	58520	0
	U	238	0.176	ug/L	0.001	0	31	8373	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:19:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	926839	1
[	Be	9	0.861	ug/L	0.029	3	23	2847	2
	C	13		ug/L			82469	140938	1
	Cl	37		ug/L			4833777	4876213	1
[>	Sc	45		ug/L			1144296	1329777	2
[	V	51	35.045	ug/L	0.712	2	9450	875217	3
[	V-1	51	34.540	ug/L	0.824	2	48	853368	1
[	Cr	52	99.953	ug/L	2.027	2	27897	2090226	1
[	Cr	53	97.763	ug/L	5.199	5	145	229208	3
[	Mn	55	1578.929	ug/L	16.272	1	487	45202034	1
[	Co	59	19.543	ug/L	0.517	2	76	411507	2
[>	Ge	72		ug/L			608948	588402	0
[	Ni	60	95.713	ug/L	2.159	2	28	363746	1
[	Ni	62	98.281	ug/L	1.651	1	64	53474	0
[	Cu	63	43.981	ug/L	0.848	1	101	380268	2
[	Cu	65	45.190	ug/L	1.033	2	39	172121	2
[	Zn	66	446.542	ug/L	6.613	1	991	991992	1
[	Zn	67	454.711	ug/L	7.106	1	141	169193	1
[	Zn	68	467.935	ug/L	7.941	1	706	736310	0
[	As	75	16.723	ug/L	0.065	0	318	34674	0
[	As-1	75	17.010	ug/L	0.148	0	12623	46279	0
[	Se	82	0.028	ug/L	0.070	253	-10	-2	574
[	Se	78	0.197	ug/L	0.257	130	12864	12542	0
[	Mo	98	0.706	ug/L	0.020	2	28	3918	2
	Y	89		ug/L			406158	598325	1
	Kr	83		ug/L			794	1244	0
[>	In	115		ug/L			1093664	1116755	1
[	Ag	107	0.273	ug/L	0.009	3	42	4286	3
[	Cd	111	6.746	ug/L	0.125	1	115	36992	0
[	Cd	114	6.577	ug/L	0.060	0	65	88571	2
[	Sb	121	0.093	ug/L	0.002	1	182	1674	0
[	Sb	123	0.092	ug/L	0.005	5	151	1267	3
[	Ba	135	781.757	ug/L	14.859	1	15	3844774	1
[	Ba	137	777.428	ug/L	17.815	2	26	6638076	1
[>	Tb	159		ug/L			1253683	1257809	0
[	Tl	205	0.521	ug/L	0.007	1	128	18417	1
[	Pb	208	356.615	ug/L	3.328	0	347	16343454	0
[	Bi	209		ug/L			2594753	2434150	0
[	Th	232	6.350	ug/L	0.097	1	1408	289049	0
[	U	238	0.840	ug/L	0.019	2	31	40871	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 16:23:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	896633 ✓	1
[	Be	9	50.153	ug/L	0.433	0	23	159267	1
	C	13		ug/L			82469	82279	2
	Cl	37		ug/L			4833777	4946278	1
[>	Sc	45		ug/L			1144296	1135888 ✓	1
[	V	51	49.833	ug/L	1.009	2	9450	1058871	2
[	V-1	51	49.761	ug/L	1.395	2	48	1050297	2
[	Cr	52	50.402	ug/L	0.612	1	27897	914351	2
[	Cr	53	50.155	ug/L	0.915	1	145	100579	1
[	Mn	55	49.946	ug/L	1.569	3	487	1221584	1
[	Co	59	49.336	ug/L	0.314	0	76	887426	1
[>	Ge	72		ug/L			608948	578598 ✓	0
[	Ni	60	50.303	ug/L	1.102	2	28	188005	1
[	Ni	62	49.159	ug/L	0.755	1	64	26332	1
[	Cu	63	50.489	ug/L	0.582	1	101	429236	0
[	Cu	65	51.021	ug/L	0.752	1	39	191083	0
[	Zn	66	50.085	ug/L	0.656	1	991	110253	1
[	Zn	67	50.809	ug/L	0.290	0	141	18710	0
[	Zn	68	50.783	ug/L	1.166	2	706	79178	1
[	As	75	50.601	ug/L	0.482	0	318	102556	0
[	As-1	75	50.646	ug/L	0.272	0	12623	111784	0
[	Se	82	50.332	ug/L	1.203	2	-10	12066	1
[	Se	78	50.492	ug/L	0.574	1	12864	40466	0
[	Mo	98	50.092	ug/L	1.293	2	28	271506	2
	Y	89		ug/L			406158	384730	0
	Kr	83		ug/L			794	789	4
[>	In	115		ug/L			1093664	1039243 ✓	0
[	Ag	107	49.196	ug/L	1.312	2	42	711321	2
[	Cd	111	50.586	ug/L	1.112	2	115	257493	2
[	Cd	114	51.618	ug/L	0.442	0	65	646382	1
[	Sb	121	51.087	ug/L	0.012	0	182	761722	0
[	Sb	123	50.523	ug/L	0.891	1	151	571766	1
[	Ba	135	50.427	ug/L	0.708	1	15	230836	1
[	Ba	137	50.637	ug/L	0.255	0	26	402449	0
[>	Tb	159		ug/L			1253683	1195386 ✓	0
[	Tl	205	49.988	ug/L	1.110	2	128	1667347	1
[	Pb	208	50.184	ug/L	0.806	1	347	2185955	0
[	Bi	209		ug/L			2594753	2399371	1
[	Th	232	52.689	ug/L	1.151	2	1408	2269382	1
[	U	238	53.276	ug/L	0.580	1	31	2460937	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 16:30:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	858012	0
[	Be	9	0.003	ug/L	0.008	252	23	31	73
	C	13		ug/L			82469	81067	2
	Cl	37		ug/L			4833777	4759199	0
[>	Sc	45		ug/L			1144296	1116609	1
|	V	51	0.019	ug/L	0.017	89	9450	9602	2
|	V-1	51	0.009	ug/L	0.011	122	48	231	96
|	Cr	52	0.049	ug/L	0.041	82	27897	28063	1
|	Cr	53	0.016	ug/L	0.015	93	145	174	16
|	Mn	55	0.165	ug/L	0.193	117	487	4400	103
[	Co	59	0.007	ug/L	0.008	115	76	191	69
[>	Ge	72		ug/L			608948	572798	1
|	Ni	60	0.015	ug/L	0.016	108	28	81	71
|	Ni	62	-0.008	ug/L	0.011	141	64	56	9
|	Cu	63	0.012	ug/L	0.013	102	101	198	52
|	Cu	65	0.012	ug/L	0.011	90	39	82	48
|	Zn	66	-0.226	ug/L	0.057	25	991	442	26
|	Zn	67	-0.198	ug/L	0.048	24	141	61	27
|	Zn	68	-0.201	ug/L	0.058	28	706	356	23
|	As	75	0.027	ug/L	0.007	26	318	352	3
|	As-1	75	0.141	ug/L	0.164	116	12623	12145	1
|	Se	82	0.043	ug/L	0.054	125	-10	0	2179
|	Se	78	0.494	ug/L	0.561	113	12864	12371	1
[	Mo	98	0.008	ug/L	0.006	77	28	68	45
	Y	89		ug/L			406158	372856	1
	Kr	83		ug/L			794	781	5
[>	In	115		ug/L			1093664	1038259	1
|	Ag	107	0.003	ug/L	0.005	136	42	89	76
|	Cd	111	0.002	ug/L	0.005	212	115	121	20
|	Cd	114	0.004	ug/L	0.006	166	65	107	70
|	Sb	121	0.044	ug/L	0.010	23	182	822	18
|	Sb	123	0.042	ug/L	0.007	16	151	621	12
|	Ba	135	0.052	ug/L	0.044	85	15	250	81
[	Ba	137	0.049	ug/L	0.042	85	26	418	81
[>	Tb	159		ug/L			1253683	1155718	0
|	Tl	205	0.010	ug/L	0.008	78	128	435	56
|	Pb	208	0.022	ug/L	0.022	101	347	1242	75
|	Bi	209		ug/L			2594753	2449475	0
|	Th	232	0.070	ug/L	0.010	13	1408	4199	9
[	U	238	0.006	ug/L	0.006	102	31	290	92

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 16:35:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

AY

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	907032	0
[	Be	9	0.088	ug/L	0.004	4	23	304	4
	C	13		ug/L			82469	96554	2
	Cl	37		ug/L			4833777	4761619	1
[>	Sc	45		ug/L			1144296	1154512	1
[	V	51	3.626	ug/L	0.020	0	9450	87150	0
[	V-1	51	3.621	ug/L	0.008	0	48	77734	1
[	Cr	52	4.066	ug/L	0.182	4	27897	100807	1
[	Cr	53	4.045	ug/L	0.090	2	145	8380	0
[	Mn	55	194.435	ug/L	1.738	0	487	4833767	1
[	Co	59	1.320	ug/L	0.041	3	76	24198	2
[>	Ge	72		ug/L			608948	584256	0
[	Ni	60	4.303	ug/L	0.053	1	28	16265	0
[	Ni	62	4.373	ug/L	0.091	2	64	2421	2
[	Cu	63	5.695	ug/L	0.178	3	101	48968	2
[	Cu	65	5.817	ug/L	0.119	2	39	22031	2
[	Zn	66	79.666	ug/L	1.013	1	991	176519	1
[	Zn	67	76.200	ug/L	1.499	1	141	28264	1
[	Zn	68	80.617	ug/L	2.238	2	706	126519	2
[	As	75	2.703	ug/L	0.049	1	318	5821	1
[	As-1	75	2.758	ug/L	0.102	3	12623	17598	0
[	Se	82	0.085	ug/L	0.070	82	-10	10	158
[	Se	78	0.090	ug/L	0.276	305	12864	12393	0
[	Mo	98	0.061	ug/L	0.006	10	28	363	10
	Y	89		ug/L			406158	406907	2
	Kr	83		ug/L			794	795	1
[>	In	115		ug/L			1093664	1061058	1
[	Ag	107	N 0.045	ug/L	0.002	3	42	711	2
[	Cd	111	1.563	ug/L	0.005	0	115	8229	1
[	Cd	114	1.555	ug/L	0.016	1	65	19945	1
[	Sb	121	0.133	ug/L	0.004	3	182	2202	3
[	Sb	123	0.132	ug/L	0.006	4	151	1672	4
[	Ba	135	53.935	ug/L	0.189	0	15	252064	0
[	Ba	137	53.190	ug/L	0.462	0	26	431591	0
[>	Tb	159		ug/L			1253683	1196951	1
[	Tl	205	0.074	ug/L	0.005	6	128	2608	5
[	Pb	208	86.029	ug/L	2.084	2	347	3751681	1
[	Bi	209		ug/L			2594753	2504865	0
[	Th	232	0.751	ug/L	0.017	2	1408	33706	1
[	U	238	0.143	ug/L	0.002	1	31	6659	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:39:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	912729	2
[	Be	9	0.426	ug/L	0.012	2	23	1401	1
	C	13		ug/L			82469	142917	2
	Cl	37		ug/L			4833777	4764708	3
[>	Sc	45		ug/L			1144296	1212662	1
[	V	51	17.155	ug/L	0.657	3	9450	395588	2
[	V-1	51	17.183	ug/L	0.652	3	48	387133	2
[	Cr	52	19.793	ug/L	0.310	1	27897	401189	0
[	Cr	53	19.869	ug/L	0.316	1	145	42630	0
[	Mn	55	940.101	ug/L	37.599	3	487	24537435	2
[	Co	59	6.250	ug/L	0.076	1	76	120086	0
[>	Ge	72		ug/L			608948	584747	1
[	Ni	60	21.496	ug/L	0.268	1	28	81207	0
[	Ni	62	22.225	ug/L	0.536	2	64	12063	1
[	Cu	63	27.782	ug/L	0.776	2	101	238693	1
[	Cu	65	27.950	ug/L	0.231	0	39	105811	1
[	Zn	66	392.428	ug/L	19.360	4	991	866153	3
[	Zn	67	364.336	ug/L	7.173	1	141	134774	3
[	Zn	68	387.587	ug/L	10.824	2	706	606117	1
[	As	75	13.336	ug/L	0.155	1	318	27541	1
[	As-1	75	13.595	ug/L	0.230	1	12623	39189	0
[	Se	82	0.180	ug/L	0.048	26	-10	34	35
[	Se	78	0.228	ug/L	0.415	182	12864	12480	0
[	Mo	98	0.289	ug/L	0.001	0	28	1610	1
	Y	89		ug/L			406158	502934	0
	Kr	83		ug/L			794	993	4
[>	In	115		ug/L			1093664	1102252	0
[	Ag	107	0.206	ug/L	0.005	2	42	3197	2
[	Cd	111	7.287	ug/L	0.025	0	115	39440	0
[	Cd	114	7.186	ug/L	0.067	0	65	95490	0
[	Sb	121	0.597	ug/L	0.011	1	182	9629	1
[	Sb	123	0.634	ug/L	0.037	5	151	7766	6
[	Ba	135	260.604	ug/L	1.719	0	15	1265153	0
[	Ba	137	269.176	ug/L	1.858	0	26	2268873	0
[>	Tb	159		ug/L			1253683	1229205	0
[	Tl	205	0.315	ug/L	0.005	1	128	10925	1
[	Pb	208	430.296	ug/L	2.824	0	347	19272430	0
[	Bi	209		ug/L			2594753	2487903	0
[	Th	232	3.373	ug/L	0.017	0	1408	150706	0
[	U	238	0.704	ug/L	0.004	0	31	33449	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:43:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	901647	1
[	Be	9	0.430	ug/L	0.015	3	23	1396	3
	C	13		ug/L			82469	147091	1
	Cl	37		ug/L			4833777	4728124	4
[>	Sc	45		ug/L			1144296	1221855	1
[	V	51	16.168	ug/L	0.423	2	9450	376291	1
[	V-1	51	16.081	ug/L	0.253	1	48	365131	0
[	Cr	52	16.760	ug/L	0.334	1	27897	346823	1
[	Cr	53	16.463	ug/L	0.435	2	145	35622	3
[	Mn	55	959.090	ug/L	28.621	2	487	25222549	1
[	Co	59	6.086	ug/L	0.117	1	76	117808	0
[>	Ge	72		ug/L			608948	598192	2
[	Ni	60	16.645	ug/L	0.645	3	28	64299	1
[	Ni	62	17.309	ug/L	0.842	4	64	9620	2
[	Cu	63	27.312	ug/L	0.392	1	101	240050	1
[	Cu	65	27.545	ug/L	1.307	4	39	106616	3
[	Zn	66	385.799	ug/L	8.120	2	991	871198	0
[	Zn	67	366.468	ug/L	6.275	1	141	138629	1
[	Zn	68	388.211	ug/L	7.801	2	706	621015	0
[	As	75	13.532	ug/L	0.530	3	318	28566	1
[	As-1	75	13.730	ug/L	0.647	4	12623	40348	0
[	Se	82	0.247	ug/L	0.077	31	-10	51	38
[	Se	78	0.047	ug/L	0.426	898	12864	12661	0
[	Mo	98	0.293	ug/L	0.014	4	28	1669	2
	Y	89		ug/L			406158	512146	1
	Kr	83		ug/L			794	997	3
[>	In	115		ug/L			1093664	1105284	1
[	Ag	107	0.209	ug/L	0.008	3	42	3254	3
[	Cd	111	7.399	ug/L	0.027	0	115	40151	1
[	Cd	114	7.261	ug/L	0.103	1	65	96754	0
[	Sb	121	0.657	ug/L	0.011	1	182	10596	0
[	Sb	123	0.658	ug/L	0.002	0	151	8071	1
[	Ba	135	265.254	ug/L	2.399	0	15	1291212	0
[	Ba	137	273.795	ug/L	2.435	0	26	2314069	0
[>	Tb	159		ug/L			1253683	1230631	1
[	Tl	205	0.314	ug/L	0.004	1	128	10918	0
[	Pb	208	429.773	ug/L	5.829	1	347	19268946	0
[	Bi	209		ug/L			2594753	2505647	0
[	Th	232	3.467	ug/L	0.060	1	1408	154990	0
[	U	238	0.732	ug/L	0.014	1	31	34856	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:47:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			923208	908490	1
	Be	**9**	**23.719**	ug/L	0.269	1	23	76329	0
	C	**13**		ug/L			82469	135321	2
	Cl	**37**		ug/L			4833777	5004130	2
>	**Sc**	**45**		ug/L			1144296	1209326	0
	V	**51**	**40.521**	ug/L	0.902	2	9450	918514	1
	V-1	**51**	**40.417**	ug/L	0.796	1	48	908303	1
	Cr	**52**	**40.403**	ug/L	0.686	1	27897	786050	1
	Cr	**53**	**40.057**	ug/L	0.987	2	145	85558	2
	Mn	**55**	**984.577**	ug/L	14.908	1	487	25637871	1
	Co	**59**	**29.086**	ug/L	0.596	2	76	557082	2
>	**Ge**	**72**		ug/L			608948	584402	0
	Ni	**60**	**42.567**	ug/L	0.827	1	28	160703	1
	Ni	**62**	**42.537**	ug/L	0.339	0	64	23023	0
	Cu	**63**	**51.068**	ug/L	1.088	2	101	438522	2
	Cu	**65**	**52.627**	ug/L	1.234	2	39	199089	2
	Zn	**66**	**482.031**	ug/L	5.737	1	991	1063498	1
	Zn	**67**	**452.672**	ug/L	8.194	1	141	167293	1
	Zn	**68**	**471.483**	ug/L	2.188	0	706	736918	0
	As	**75**	**40.254**	ug/L	0.471	1	318	82469	1
	As-1	**75**	**39.279**	ug/L	0.158	0	12623	90285	0
	Se	**82**	**76.170**	ug/L	1.355	1	-10	18451	1
	Se	**78**	**76.295**	ug/L	0.069	0	12864	55451	0
	Mo	**98**	**21.191**	ug/L	0.505	2	28	116035	2
	Y	**89**		ug/L			406158	521232	0
	Kr	**83**		ug/L			794	1012	0
>	**In**	**115**		ug/L			1093664	1111092	0
	Ag	**107**	**19.626** ✓	ug/L	0.393	2	42	303419	2
	Cd	**111**	**30.405**	ug/L	0.496	1	115	165500	1
	Cd	**114**	**29.875**	ug/L	0.272	0	65	400014	1
	Sb	**121**	**2.272**	ug/L	0.029	1	182	36392	1
	Sb	**123**	**2.293**	ug/L	0.014	0	151	27888	0
	Ba	**135**	**289.793**	ug/L	4.781	1	15	1418090	1
	Ba	**137**	**298.816**	ug/L	3.493	1	26	2538985	1
>	**Tb**	**159**		ug/L			1253683	1239499	0
	Tl	**205**	**23.794**	ug/L	0.046	0	128	823101	0
	Pb	**208**	**463.306**	ug/L	2.566	0	347	20924633	0
	Bi	**209**		ug/L			2594753	2527207	0
	Th	**232**	**25.580**	ug/L	0.210	0	1408	1143206	0
	U	**238**	**24.450**	ug/L	0.366	1	31	1171109	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:52:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	932994	1
	Be	9	0.426	ug/L	0.021	5	23	1431	4
	C	13		ug/L			82469	122101	1
	Cl	37		ug/L			4833777	4924513	0
>	Sc	45		ug/L			1144296	1236607	3
	V	51	17.948	ug/L	0.805	4	9450	421302	0
	V-1	51	17.889	ug/L	0.729	4	48	410737	0
	Cr	52	15.373	ug/L	0.777	5	27897	324191	1
	Cr	53	15.192	ug/L	0.517	3	145	33254	0
	Mn	55	857.749	ug/L	10.279	1	487	22832315	2
	Co	59	5.178	ug/L	0.174	3	76	101397	0
>	Ge	72		ug/L			608948	600915	2
	Ni	60	12.937	ug/L	0.217	1	28	50232	0
	Ni	62	13.752	ug/L	0.475	3	64	7695	3
	Cu	63	14.896	ug/L	0.485	3	101	131543	1
	Cu	65	14.919	ug/L	0.244	1	39	58045	0
	Zn	66	245.703	ug/L	9.514	3	991	557622	2
	Zn	67	242.480	ug/L	2.142	0	141	92199	1
	Zn	68	254.886	ug/L	8.353	3	706	409780	1
	As	75	8.251	ug/L	0.300	3	318	17623	1
	As-1	75	8.367	ug/L	0.442	5	12623	29566	1
	Se	82	0.027	ug/L	0.036	130	-10	-3	275
	Se	78	0.036	ug/L	0.509	1397	12864	12712	0
	Mo	98	0.360	ug/L	0.007	2	28	2051	0
	Y	89		ug/L			406158	518288	2
	Kr	83		ug/L			794	1035	2
>	In	115		ug/L			1093664	1098430	1
	Ag	107	0.135	ug/L	0.007	5	42	2109	3
	Cd	111	3.818	ug/L	0.092	2	115	20639	0
	Cd	114	3.690	ug/L	0.134	3	65	48878	1
	Sb	121	0.181	ug/L	0.005	2	182	3032	2
	Sb	123	0.179	ug/L	0.002	1	151	2296	0
	Ba	135	310.806	ug/L	8.485	2	15	1503161	0
	Ba	137	315.168	ug/L	6.816	2	26	2646671	0
>	Tb	159		ug/L			1253683	1259705	1
	Tl	205	0.215	ug/L	0.006	2	128	7693	0
	Pb	208	209.897	ug/L	3.270	1	347	9632863	0
	Bi	209		ug/L			2594753	2521348	0
	Th	232	4.321	ug/L	0.082	1	1408	197419	0
	U	238	0.764	ug/L	0.018	2	31	37235	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 16:56:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	915797	1
	Be	9	0.563	ug/L	0.006	1	23	1849	3
	C	13		ug/L			82469	128083	0
	Cl	37		ug/L			4833777	4749391	3
>	Sc	45		ug/L			1144296	1288119	0
	V	51	29.904	ug/L	0.492	1	9450	724803	0
	V-1	51	30.038	ug/L	0.293	0	48	719063	0
	Cr	52	29.733	ug/L	0.607	2	27897	624424	1
	Cr	53	30.186	ug/L	0.653	2	145	68724	2
	Mn	55	836.643	ug/L	3.382	0	487	23204198	0
	Co	59	10.340	ug/L	0.429	4	76	210969	3
>	Ge	72		ug/L			608948	597913	1
	Ni	60	23.038	ug/L	0.435	1	28	88990	1
	Ni	62	24.384	ug/L	0.496	2	64	13528	0
	Cu	63	26.947	ug/L	0.636	2	101	236784	2
	Cu	65	27.861	ug/L	0.244	0	39	107846	0
	Zn	66	306.814	ug/L	6.278	2	991	692823	0
	Zn	67	294.064	ug/L	3.842	1	141	111228	0
	Zn	68	304.387	ug/L	8.934	2	706	486915	2
	As	75	15.227	ug/L	0.075	0	318	32111	1
	As-1	75	15.468	ug/L	0.129	0	12623	43888	0
	Se	82	0.082	ug/L	0.102	124	-10	10	243
	Se	78	0.115	ug/L	0.259	224	12864	12697	0
	Mo	98	0.534	ug/L	0.004	0	28	3018	1
	Y	89		ug/L			406158	588706	0
	Kr	83		ug/L			794	1182	3
>	In	115		ug/L			1093664	1093972	1
	Ag	107	0.243	ug/L	0.008	3	42	3740	2
	Cd	111	5.966	ug/L	0.096	1	115	32066	0
	Cd	114	5.858	ug/L	0.068	1	65	77274	1
	Sb	121	0.318	ug/L	0.010	3	182	5176	2
	Sb	123	0.316	ug/L	0.005	1	151	3919	0
	Ba	135	280.742	ug/L	7.180	2	15	1352458	1
	Ba	137	291.309	ug/L	6.244	2	26	2436696	1
>	Tb	159		ug/L			1253683	1249603	0
	Tl	205	0.329	ug/L	0.010	2	128	11596	3
	Pb	208	236.732	ug/L	0.931	0	347	10779081	0
	Bi	209		ug/L			2594753	2476216	0
	Th	232	5.857	ug/L	0.104	1	1408	265001	1
	U	238	0.768	ug/L	0.002	0	31	37139	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:00:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

AM

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	902440	2
[	Be	9	0.538	ug/L	0.005	0	23	1741	1
	C	13		ug/L			82469	122365	0
	Cl	37		ug/L			4833777	4862789	2
[>	Sc	45		ug/L			1144296	1257814	2
[	V	51	30.103	ug/L	1.191	3	9450	712158	2
[	V-1	51	29.966	ug/L	1.183	3	48	700275	3
[	Cr	52	29.203	ug/L	1.135	3	27897	599221	2
[	Cr	53	28.749	ug/L	0.218	0	145	63911	1
[	Mn	55	969.209	ug/L	40.449	4	487	26235646	2
[	Co	59	10.995	ug/L	0.174	1	76	219036	1
[>	Ge	72		ug/L			608948	579197	0
[	Ni	60	25.938	ug/L	0.169	0	28	97065	1
[	Ni	62	26.637	ug/L	0.751	2	64	14311	2
[	Cu	63	29.889	ug/L	0.495	1	101	254420	2
[	Cu	65	30.712	ug/L	0.487	1	39	115156	1
[	Zn	66	327.255	ug/L	4.335	1	991	715900	1
[	Zn	67	314.332	ug/L	4.242	1	141	115169	0
[	Zn	68	325.785	ug/L	4.560	1	706	504860	1
[	As	75	18.671	ug/L	0.229	1	318	38073	1
[	As-1	75	19.191	ug/L	0.216	1	12623	49860	1
[	Se	82	0.052	ug/L	0.068	131	-10	2	586
[	Se	78	0.775	ug/L	0.066	8	12864	12670	0
[	Mo	98	0.478	ug/L	0.002	0	28	2621	0
	Y	89		ug/L			406158	548155	0
	Kr	83		ug/L			794	1159	5
[>	In	115		ug/L			1093664	1071369	1
[	Ag	107	0.245	ug/L	0.007	2	42	3698	2
[	Cd	111	6.584	ug/L	0.077	1	115	34647	0
[	Cd	114	6.668	ug/L	0.058	0	65	86133	0
[	Sb	121	0.219	ug/L	0.004	1	182	3543	0
[	Sb	123	0.222	ug/L	0.002	1	151	2743	1
[	Ba	135	298.080	ug/L	1.542	0	15	1406567	0
[	Ba	137	310.692	ug/L	2.401	0	26	2545402	0
[>	Tb	159		ug/L			1253683	1234511	1
[	Tl	205	0.306	ug/L	0.001	0	128	10664	1
[	Pb	208	277.549	ug/L	2.329	0	347	12483988	0
[	Bi	209		ug/L			2594753	2445710	0
[	Th	232	6.385	ug/L	0.019	0	1408	285228	1
[	U	238	0.632	ug/L	0.004	0	31	30161	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:04:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	929353	0
[	Be	9	0.492	ug/L	0.008	1	23	1642	1
	C	13		ug/L			82469	119076	1
	Cl	37		ug/L			4833777	4851187	3
[>	Sc	45		ug/L			1144296	1282088	2
|	V	51	28.252	ug/L	0.258	0	9450	682085	1
|	V-1	51	28.128	ug/L	0.490	1	48	670025	1
|	Cr	52	28.347	ug/L	0.478	1	27897	593871	1
|	Cr	53	27.930	ug/L	1.208	4	145	63250	1
|	Mn	55	834.379	ug/L	34.177	4	487	23016792	1
[	Co	59	10.294	ug/L	0.359	3	76	208941	1
[>	Ge	72		ug/L			608948	599633	1
|	Ni	60	23.815	ug/L	0.886	3	28	92235	2
|	Ni	62	24.585	ug/L	0.338	1	64	13680	2
|	Cu	63	26.094	ug/L	0.421	1	101	229931	0
|	Cu	65	26.434	ug/L	0.799	3	39	102592	1
|	Zn	66	146.313	ug/L	4.002	2	991	331845	2
|	Zn	67	152.386	ug/L	3.946	2	141	57868	2
|	Zn	68	156.126	ug/L	2.565	1	706	250810	0
|	As	75	11.023	ug/L	0.209	1	318	23394	0
|	As-1	75	11.141	ug/L	0.309	2	12623	35173	0
|	Se	82	0.007	ug/L	0.045	596	-10	-8	134
|	Se	78	-0.049	ug/L	0.367	750	12864	12638	1
[	Mo	98	0.433	ug/L	0.028	6	28	2463	6
	Y	89		ug/L			406158	556540	2
	Kr	83		ug/L			794	1164	4
[>	In	115		ug/L			1093664	1063757	1
|	Ag	107	0.159	ug/L	0.006	3	42	2391	2
|	Cd	111	2.123	ug/L	0.058	2	115	11165	1
|	Cd	114	2.067	ug/L	0.010	0	65	26551	0
|	Sb	121	0.100	ug/L	0.003	3	182	1705	1
|	Sb	123	0.103	ug/L	0.002	2	151	1340	2
|	Ba	135	283.722	ug/L	3.010	1	15	1329329	1
[	Ba	137	290.932	ug/L	2.306	0	26	2366721	1
[>	Tb	159		ug/L			1253683	1247741	0
|	Tl	205	0.154	ug/L	0.002	1	128	5481	1
|	Pb	208	103.866	ug/L	0.366	0	347	4722458	0
|	Bi	209		ug/L			2594753	2451903	0
|	Th	232	6.324	ug/L	0.070	1	1408	285581	1
[	U	238	0.614	ug/L	0.010	1	31	29630	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:09:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	914812	1
[	Be	9	0.591	ug/L	0.026	4	23	1938	2
	C	13		ug/L			82469	96879	1
	Cl	37		ug/L			4833777	4769947	4
[>	Sc	45		ug/L			1144296	1273891	1
[	V	51	32.161	ug/L	0.539	1	9450	770090	0
[	V-1	51	32.237	ug/L	0.456	1	48	763162	1
[	Cr	52	26.787	ug/L	0.778	2	27897	559368	1
[	Cr	53	27.084	ug/L	0.470	1	145	60993	1
[	Mn	55	491.279	ug/L	1.677	0	487	13475109	0
[	Co	59	9.015	ug/L	0.092	1	76	181940	1
[>	Ge	72		ug/L			608948	588382	1
[	Ni	60	22.468	ug/L	0.456	2	28	85403	0
[	Ni	62	24.610	ug/L	0.805	3	64	13436	3
[	Cu	63	23.177	ug/L	0.115	0	101	200419	0
[	Cu	65	23.179	ug/L	0.077	0	39	88303	1
[	Zn	66	57.445	ug/L	1.888	3	991	128420	2
[	Zn	67	68.514	ug/L	1.023	1	141	25610	2
[	Zn	68	64.109	ug/L	0.802	1	706	101483	2
[	As	75	5.555	ug/L	0.064	1	318	11722	0
[	As-1	75	5.576	ug/L	0.193	3	12623	23366	0
[	Se	82	-0.214	ug/L	0.015	7	-10	-62	6
[	Se	78	0.147	ug/L	0.432	293	12864	12512	0
[	Mo	98	0.340	ug/L	0.009	2	28	1900	2
	Y	89		ug/L			406158	622722	0
	Kr	83		ug/L			794	1347	2
[>	In	115		ug/L			1093664	1053749	1
[	Ag	107	0.120	ug/L	0.011	8	42	1793	7
[	Cd	111	0.354	ug/L	0.030	8	115	1937	9
[	Cd	114	0.152	ug/L	0.001	0	65	1988	1
[	Sb	121	0.014	ug/L	0.001	5	182	389	3
[	Sb	123	0.013	ug/L	0.001	5	151	290	3
[	Ba	135	188.063	ug/L	1.866	0	15	872759	0
[	Ba	137	187.058	ug/L	3.882	2	26	1507068	0
[>	Tb	159		ug/L			1253683	1234478	0
[	Tl	205	0.127	ug/L	0.001	0	128	4498	1
[	Pb	208	13.965	ug/L	0.062	0	347	628496	0
[	Bi	209		ug/L			2594753	2408955	0
[	Th	232	6.801	ug/L	0.055	0	1408	303713	0
[	U	238	1.034	ug/L	0.022	2	31	49365	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:13:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	895666	0
[	Be	9	0.408	ug/L	0.017	4	23	1316	4
	C	13		ug/L			82469	92965	1
	Cl	37		ug/L			4833777	4747541	1
[>	Sc	45		ug/L			1144296	1228702	1
[	V	51	27.936	ug/L	0.607	2	9450	646532	1
[	V-1	51	27.798	ug/L	0.439	1	48	634722	0
[	Cr	52	25.263	ug/L	0.882	3	27897	510539	2
[	Cr	53	24.817	ug/L	0.394	1	145	53914	0
[	Mn	55	337.329	ug/L	4.892	1	487	8924494	1
[	Co	59	7.291	ug/L	0.167	2	76	141933	1
[>	Ge	72		ug/L			608948	582061	0
[	Ni	60	18.452	ug/L	0.328	1	28	69399	1
[	Ni	62	19.711	ug/L	0.680	3	64	10658	3
[	Cu	63	16.074	ug/L	0.109	0	101	137542	0
[	Cu	65	16.355	ug/L	0.300	1	39	61646	1
[	Zn	66	39.834	ug/L	1.214	3	991	88398	2
[	Zn	67	47.820	ug/L	0.840	1	141	17722	1
[	Zn	68	43.647	ug/L	0.726	1	706	68560	1
[	As	75	4.597	ug/L	0.068	1	318	9649	1
[	As-1	75	4.753	ug/L	0.074	1	12623	21487	0
[	Se	82	0.045	ug/L	0.032	71	-10	1	730
[	Se	78	0.724	ug/L	0.031	4	12864	12704	0
[	Mo	98	0.424	ug/L	0.018	4	28	2341	4
	Y	89		ug/L			406158	553782	0
	Kr	83		ug/L			794	1143	1
[>	In	115		ug/L			1093664	1054432	0
[	Ag	107	0.072	ug/L	0.010	13	42	1093	12
[	Cd	111	0.240	ug/L	0.038	15	115	1351	14
[	Cd	114	0.105	ug/L	0.005	5	65	1401	5
[	Sb	121	0.017	ug/L	0.001	7	182	426	4
[	Sb	123	0.015	ug/L	0.002	11	151	319	6
[	Ba	135	136.035	ug/L	1.442	1	15	631737	0
[	Ba	137	134.971	ug/L	2.049	1	26	1088310	1
[>	Tb	159		ug/L			1253683	1233378	0
[	Tl	205	0.104	ug/L	0.001	0	128	3705	1
[	Pb	208	9.245	ug/L	0.157	1	347	415790	1
[	Bi	209		ug/L			2594753	2430194	0
[	Th	232	5.625	ug/L	0.031	0	1408	251207	0
[	U	238	0.814	ug/L	0.005	0	31	38828	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 17:17:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	873440	0
	Be	9	50.537	ug/L	0.276	0	23	156349	1
	C	13		ug/L			82469	84949	1
	Cl	37		ug/L			4833777	4829379	2
>	Sc	45		ug/L			1144296	1123203	1
	V	51	50.632	ug/L	0.404	0	9450	1063661	1
	V-1	51	50.220	ug/L	0.281	0	48	1048220	1
	Cr	52	51.526	ug/L	0.877	1	27897	923409	1
	Cr	53	50.128	ug/L	0.482	0	145	99407	1
	Mn	55	49.269	ug/L	0.351	0	487	1191892	1
	Co	59	49.552	ug/L	0.379	0	76	881360	1
>	Ge	72		ug/L			608948	581048	0
	Ni	60	50.241	ug/L	0.995	1	28	188562	1
	Ni	62	49.550	ug/L	0.237	0	64	26655	0
	Cu	63	49.774	ug/L	0.777	1	101	424934	1
	Cu	65	50.821	ug/L	0.406	0	39	191148	1
	Zn	66	49.917	ug/L	0.217	0	991	110346	0
	Zn	67	50.103	ug/L	1.631	3	141	18527	2
	Zn	68	50.458	ug/L	1.167	2	706	79004	1
	As	75	50.156	ug/L	0.561	1	318	102085	0
	As-1	75	50.151	ug/L	0.635	1	12623	111272	0
	Se	82	50.530	ug/L	0.721	1	-10	12165	0
	Se	78	50.752	ug/L	1.217	2	12864	40780	0
	Mo	98	49.787	ug/L	0.703	1	28	271001	0
	Y	89		ug/L			406158	385589	1
	Kr	83		ug/L			794	920	4
>	In	115		ug/L			1093664	1040685	1
	Ag	107	49.306	ug/L	1.011	2	42	713956	3
	Cd	111	50.742	ug/L	0.680	1	115	258604	0
	Cd	114	51.126	ug/L	1.171	2	65	640972	0
	Sb	121	50.498	ug/L	0.659	1	182	753908	0
	Sb	123	50.347	ug/L	0.958	1	151	570461	0
	Ba	135	50.310	ug/L	0.225	0	15	230612	1
	Ba	137	49.697	ug/L	0.670	1	26	395481	0
>	Tb	159		ug/L			1253683	1198210	1
	Tl	205	48.899	ug/L	0.403	0	128	1634961	0
	Pb	208	49.751	ug/L	0.455	0	347	2172262	0
	Bi	209		ug/L			2594753	2413503	0
	Th	232	52.696	ug/L	1.090	2	1408	2274910	1
	U	238	53.386	ug/L	0.745	1	31	2471682	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 17:24:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	864178	1
	Be	9	0.000	ug/L	0.002	2083	23	22	21
	C	13		ug/L			82469	81696	1
	Cl	37		ug/L			4833777	4785776	1
>	Sc	45		ug/L			1144296	1092652	1
	V	51	0.007	ug/L	0.001	20	9450	9164	1
	V-1	51	0.003	ug/L	0.003	120	48	103	66
	Cr	52	0.022	ug/L	0.014	62	27897	27011	2
	Cr	53	0.008	ug/L	0.003	30	145	154	1
	Mn	55	0.015	ug/L	0.016	105	487	817	44
	Co	59	0.002	ug/L	0.003	125	76	112	43
>	Ge	72		ug/L			608948	568261	0
	Ni	60	0.001	ug/L	0.002	246	28	29	24
	Ni	62	-0.016	ug/L	0.024	150	64	51	24
	Cu	63	0.007	ug/L	0.002	36	101	150	13
	Cu	65	0.004	ug/L	0.002	42	39	52	13
	Zn	66	-0.266	ug/L	0.012	4	991	354	7
	Zn	67	-0.214	ug/L	0.013	6	141	55	9
	Zn	68	-0.250	ug/L	0.008	3	706	279	5
	As	75	0.058	ug/L	0.010	16	318	412	5
	As-1	75	0.187	ug/L	0.026	14	12623	12141	0
	Se	82	0.052	ug/L	0.011	20	-10	2	89
	Se	78	0.648	ug/L	0.120	18	12864	12361	0
	Mo	98	0.004	ug/L	0.001	29	28	48	14
	Y	89		ug/L			406158	365998	3
	Kr	83		ug/L			794	840	2
>	In	115		ug/L			1093664	1026708	1
	Ag	107	0.001	ug/L	0.002	194	42	57	59
	Cd	111	-0.002	ug/L	0.005	275	115	99	24
	Cd	114	-0.000	ug/L	0.002	732	65	59	34
	Sb	121	0.041	ug/L	0.002	5	182	772	3
	Sb	123	0.039	ug/L	0.002	6	151	582	5
	Ba	135	0.008	ug/L	0.007	92	15	50	67
	Ba	137	0.007	ug/L	0.008	105	26	83	74
>	Tb	159		ug/L			1253683	1140266	1
	Tl	205	0.009	ug/L	0.003	34	128	410	25
	Pb	208	0.001	ug/L	0.003	445	347	348	40
	Bi	209		ug/L			2594753	2430203	0
	Th	232	0.057	ug/L	0.001	2	1408	3630	0
	U	238	0.003	ug/L	0.002	84	31	157	70

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 A-L SWN
Sample Dil Factor: 500
Comments:
Sample Date/Time: Monday, November 19, 2012 17:34:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			923208	882415	1
[	**Be**	**9**	**0.015**	ug/L	0.002	14	23	69	10
	C	**13**		ug/L			82469	84902	1
	Cl	**37**		ug/L			4833777	4625317	1
[>	**Sc**	**45**		ug/L			1144296	1134176	1
[	**V**	**51**	**0.968**	ug/L	0.008	0	9450	29730	1
[	**V-1**	**51**	**0.972**	ug/L	0.009	0	48	20529	2
[	**Cr**	**52**	**1.044**	ug/L	0.039	3	27897	45975	1
[	**Cr**	**53**	**1.055**	ug/L	0.034	3	145	2252	1
[	**Mn**	**55**	**44.545**	ug/L	0.969	2	487	1088109	1
[	**Co**	**59**	**0.370**	ug/L	0.007	1	76	6712	0
[>	**Ge**	**72**		ug/L			608948	582662	1
[	**Ni**	**60**	**0.989**	ug/L	0.034	3	28	3747	2
[	**Ni**	**62**	**0.957**	ug/L	0.058	6	64	576	4
[	**Cu**	**63**	**1.078**	ug/L	0.015	1	101	9328	2
[	**Cu**	**65**	**1.109**	ug/L	0.024	2	39	4218	2
[	**Zn**	**66**	**19.567**	ug/L	0.598	3	991	43939	1
[	**Zn**	**67**	**18.265**	ug/L	0.486	2	141	6858	1
[	**Zn**	**68**	**19.352**	ug/L	0.682	3	706	30794	1
[	**As**	**75**	**0.705**	ug/L	0.008	1	318	1740	1
[	**As-1**	**75**	**0.671**	ug/L	0.097	14	12623	13408	0
[	**Se**	**82**	**0.037**	ug/L	0.082	221	-10	0	2165
[	**Se**	**78**	**-0.037**	ug/L	0.375	1015	12864	12286	0
[	**Mo**	**98**	**0.023**	ug/L	0.004	17	28	153	12
	Y	**89**		ug/L			406158	384078	1
	Kr	**83**		ug/L			794	835	5
[>	**In**	**115**		ug/L			1093664	1054105	1
[	**Ag**	**107**	**0.017**	ug/L	0.001	5	42	287	4
[	**Cd**	**111**	**0.410**	ug/L	0.003	0	115	2230	1
[	**Cd**	**114**	**0.412**	ug/L	0.010	2	65	5290	1
[	**Sb**	**121**	**0.018**	ug/L	0.003	17	182	447	11
[	**Sb**	**123**	**0.016**	ug/L	0.002	14	151	334	9
[	**Ba**	**135**	**9.068**	ug/L	0.107	1	15	42113	0
[	**Ba**	**137**	**8.867**	ug/L	0.086	0	26	71498	0
[>	**Tb**	**159**		ug/L			1253683	1187092	0
[	**Tl**	**205**	**0.021**	ug/L	0.002	11	128	802	10
[	**Pb**	**208**	**20.568**	ug/L	0.139	0	347	889921	0
[	**Bi**	**209**		ug/L			2594753	2513663	2
[	**Th**	**232**	**0.194**	ug/L	0.002	0	1408	9626	1
[	**U**	**238**	**0.020**	ug/L	0.000	0	31	951	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 A SWN
Sample Dil Factor: 100
Comments:

Pb Zn

Sample Date/Time: Monday, November 19, 2012 17:38:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	888886	2
	Be	9	0.092	ug/L	0.006	6	23	312	4
	C	13		ug/L			82469	91632	1
	Cl	37		ug/L			4833777	4624975	0
>	Sc	45		ug/L			1144296	1143656	1
	V	51	4.625	ug/L	0.038	0	9450	107529	1
	V-1	51	4.632	ug/L	0.010	0	48	98484	1
	Cr	52	4.956	ug/L	0.160	3	27897	115665	3
	Cr	53	4.975	ug/L	0.068	1	145	10177	1
	Mn	55	218.652	ug/L	0.830	0	487	5384721	1
	Co	59	1.669	ug/L	0.020	1	76	30295	1
>	Ge	72		ug/L			608948	587070✓	0
	Ni	60	4.352	ug/L	0.012	0	28	16530	0
	Ni	62	4.476	ug/L	0.146	3	64	2489	3
	Cu	63	4.923	ug/L	0.168	3	101	42552	3
	Cu	65	5.203	ug/L	0.112	2	39	19806	2
	Zn	66	91.310	ug/L	1.871	2	991	203143	1
	Zn	67	83.843	ug/L	2.037	2	141	31237	2
	Zn	68	91.449	ug/L	0.848	0	706	144136	1
	As	75	3.126	ug/L	0.072	2	318	6716	1
	As-1	75	3.106	ug/L	0.077	2	12623	18380	1
	Se	82	0.111	ug/L	0.062	55	-10	17	87
	Se	78	-0.089	ug/L	0.297	334	12864	12352	1
	Mo	98	0.119	ug/L	0.004	3	28	684	2
	Y	89		ug/L			406158	403768	0
	Kr	83		ug/L			794	866	3
>	In	115		ug/L			1093664	1077497	0
	Ag	107	0.078	ug/L	0.002	2	42	1211	2
	Cd	111	1.928	ug/L	0.043	2	115	10283	1
	Cd	114	1.905	ug/L	0.035	1	65	24795	1
	Sb	121	0.055	ug/L	0.001	2	182	1024	2
	Sb	123	0.052	ug/L	0.002	4	151	763	3
	Ba	135	41.301	ug/L	0.801	1	15	196002	1
	Ba	137	41.123	ug/L	0.729	1	26	338850	1
>	Tb	159		ug/L			1253683	1192401✓	1
	Tl	205	0.088	ug/L	0.003	2	128	3046	3
	Pb	208	99.742	ug/L	0.834	0	347	4333756	1
	Bi	209		ug/L			2594753	2482084	1
	Th	232	0.934	ug/L	0.011	1	1408	41443	0
	U	238	0.093	ug/L	0.002	2	31	4312	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 17:42:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			923208	904251	1
[	**Be**	**9**	**0.098**	ug/L	0.003	2	23	335	3
	C	**13**		ug/L			82469	91405	1
	Cl	**37**		ug/L			4833777	4702344	1
[>	**Sc**	**45**		ug/L			1144296	1148494	3
[	**V**	**51**	**4.662**	ug/L	0.246	5	9450	108660	1
[	**V-1**	**51**	**4.664**	ug/L	0.246	5	48	99477	2
[	**Cr**	**52**	**5.366**	ug/L	0.149	2	27897	123391	1
[	**Cr**	**53**	**5.365**	ug/L	0.124	2	145	11006	1
[	**Mn**	**55**	**220.487**	ug/L	5.686	2	487	5450734	2
[	**Co**	**59**	**1.761**	ug/L	0.057	3	76	32078	0
[>	**Ge**	**72**		ug/L			608948	593024 ✓	1
[	**Ni**	**60**	**4.719**	ug/L	0.052	1	28	18105	2
[	**Ni**	**62**	**4.864**	ug/L	0.140	2	64	2726	2
[	**Cu**	**63**	**4.994**	ug/L	0.031	0	101	43599	0
[	**Cu**	**65**	**5.148**	ug/L	0.186	3	39	19796	3
[	**Zn**	**66**	**92.932**	ug/L	2.645	2	991	208789	1
[	**Zn**	**67**	**84.878**	ug/L	2.249	2	141	31934	1
[	**Zn**	**68**	**92.216**	ug/L	0.435	0	706	146809	1
[	**As**	**75**	**3.214**	ug/L	0.085	2	318	6965	1
[	**As-1**	**75**	**3.200**	ug/L	0.185	5	12623	18752	0
[	**Se**	**82**	**0.036**	ug/L	0.057	157	-10	0	1430
[	**Se**	**78**	**-0.134**	ug/L	0.383	285	12864	12449	0
[	**Mo**	**98**	**0.074**	ug/L	0.008	10	28	438	10
	Y	**89**		ug/L			406158	410016	1
	Kr	**83**		ug/L			794	893	3
[>	**In**	**115**		ug/L			1093664	1069260	1
[	**Ag**	**107**	**0.080**	ug/L	0.001	1	42	1229	1
[	**Cd**	**111**	**1.918**	ug/L	0.007	0	115	10152	1
[	**Cd**	**114**	**1.949**	ug/L	0.011	0	65	25173	0
[	**Sb**	**121**	**0.051**	ug/L	0.001	2	182	953	1
[	**Sb**	**123**	**0.048**	ug/L	0.003	6	151	709	4
[	**Ba**	**135**	**43.118**	ug/L	0.533	1	15	203070	1
[	**Ba**	**137**	**42.635**	ug/L	0.290	0	26	348629	0
[>	**Tb**	**159**		ug/L			1253683	1200148 ✓	1
[	**Tl**	**205**	**0.088**	ug/L	0.002	2	128	3056	1
[	**Pb**	**208**	**101.608**	ug/L	1.430	1	347	4443097	0
[	**Bi**	**209**		ug/L			2594753	2517858	0
[	**Th**	**232**	**1.427**	ug/L	0.014	0	1408	63007	0
[	**U**	**238**	**0.141**	ug/L	0.002	1	31	6552	0

VR33 : 00519

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, November 19, 2012 17:46:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Pb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	893153	0
	Be	9	5.287	ug/L	0.100	1	23	16746	1
	C	13		ug/L			82469	92145	1
	Cl	37		ug/L			4833777	4744096	3
>	Sc	45		ug/L			1144296	1151678	2
	V	51	10.274	ug/L	0.219	2	9450	228848	1
	V-1	51	10.157	ug/L	0.317	3	48	217316	0
	Cr	52	10.365	ug/L	0.101	0	27897	212936	2
	Cr	53	9.970	ug/L	0.567	5	145	20374	3
	Mn	55	223.187	ug/L	6.213	2	487	5533530	2
	Co	59	6.842	ug/L	0.272	3	76	124769	1
>	Ge	72		ug/L			608948	582461 ✓	0
	Ni	60	10.129	ug/L	0.045	0	28	38132	0
	Ni	62	10.074	ug/L	0.484	4	64	5482	5
	Cu	63	10.479	ug/L	0.399	3	101	89770	4
	Cu	65	10.719	ug/L	0.220	2	39	40442	2
	Zn	66	112.719	ug/L	2.213	1	991	248605	2
	Zn	67	103.804	ug/L	1.222	1	141	38341	1
	Zn	68	110.869	ug/L	0.525	0	706	173230	1
	As	75	9.021	ug/L	0.173	1	318	18656	2
	As-1	75	8.816	ug/L	0.081	0	12623	29561	1
	Se	82	16.919	ug/L	0.324	1	-10	4077	2
	Se	78	17.078	ug/L	0.102	0	12864	21922	0
	Mo	98	4.531	ug/L	0.118	2	28	24754	3
	Y	89		ug/L			406158	408320	0
	Kr	83		ug/L			794	884	3
>	In	115		ug/L			1093664	1076177	1
	Ag	107	4.703	ug/L	0.054	1	42	70451	1
	Cd	111	7.207	ug/L	0.019	0	115	38085	1
	Cd	114	7.104	ug/L	0.072	1	65	92165	0
	Sb	121	0.504	ug/L	0.011	2	182	7963	2
	Sb	123	0.493	ug/L	0.005	0	151	5928	1
	Ba	135	47.530	ug/L	0.815	1	15	225264	0
	Ba	137	47.353	ug/L	0.544	1	26	389678	0
>	Tb	159		ug/L			1253683	1193700 ✓	0
	Tl	205	5.251	ug/L	0.035	0	128	175030	0
	Pb	208	107.404	ug/L	0.311	0	347	4671805	0
	Bi	209		ug/L			2594753	2483395	1
	Th	232	5.635	ug/L	0.061	1	1408	243570	1
	U	238	5.379	ug/L	0.056	1	31	248156	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:50:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	891164	2
	Be	9	0.595	ug/L	0.025	4	23	1898	1
	C	13		ug/L			82469	120897	1
	Cl	37		ug/L			4833777	4814902	3
>	Sc	45		ug/L			1144296	1294677	1
	V	51	28.265	ug/L	1.182	4	9450	689004	3
	V-1	51	28.219	ug/L	0.999	3	48	678796	2
	Cr	52	52.490	ug/L	1.035	1	27897	1083786	1
	Cr	53	52.151	ug/L	0.353	0	145	119203	0
	Mn	55	1082.792	ug/L	17.464	1	487	30181134	1
	Co	59	8.732	ug/L	0.216	2	76	179079	1
>	Ge	72		ug/L			608948	578128	1
	Ni	60	37.551	ug/L	0.988	2	28	140229	1
	Ni	62	38.758	ug/L	0.845	2	64	20755	1
	Cu	63	27.118	ug/L	0.716	2	101	230404	2
	Cu	65	26.815	ug/L	0.797	2	39	100345	1
	Zn	66	281.959	ug/L	5.045	1	991	615770	1
	Zn	67	277.794	ug/L	2.238	0	141	101608	0
	Zn	68	281.640	ug/L	3.885	1	706	435696	0
	As	75	14.988	ug/L	0.196	1	318	30563	0
	As-1	75	15.357	ug/L	0.306	1	12623	42215	0
	Se	82	-0.120	ug/L	0.047	39	-10	-38	29
	Se	78	0.557	ug/L	0.406	72	12864	12523	0
	Mo	98	0.405	ug/L	0.017	4	28	2221	2
	Y	89		ug/L			406158	534328	0
	Kr	83		ug/L			794	1275	0
>	In	115		ug/L			1093664	1084456	1
	Ag	107	0.261	ug/L	0.012	4	42	3971	3
	Cd	111	5.432	ug/L	0.098	1	115	28952	0
	Cd	114	5.369	ug/L	0.101	1	65	70203	0
	Sb	121	0.118	ug/L	0.005	3	182	2010	2
	Sb	123	0.116	ug/L	0.006	4	151	1521	3
	Ba	135	381.151	ug/L	7.782	2	15	1820278	1
	Ba	137	392.153	ug/L	5.151	1	26	3251799	0
>	Tb	159		ug/L			1253683	1223013	0
	Tl	205	0.296	ug/L	0.008	2	128	10210	2
	Pb	208	307.689	ug/L	4.501	1	347	13710728	0
	Bi	209		ug/L			2594753	2437993	0
	Th	232	4.665	ug/L	0.097	2	1408	206827	1
	U	238	1.134	ug/L	0.005	0	31	53601	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:55:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			923208	903119	1
[	Be	9	0.438	ug/L	0.008	1	23	1424	3
	C	13		ug/L			82469	116924	0
	Cl	37		ug/L			4833777	4833208	2
[>	Sc	45		ug/L			1144296	1214926	1
[	V	51	18.285	ug/L	0.687	3	9450	421777	2
[	V-1	51	18.349	ug/L	0.634	3	48	414187	1
[	Cr	52	13.492	ug/L	0.439	3	27897	283363	1
[	Cr	53	13.745	ug/L	0.264	1	145	29592	0
[	Mn	55	529.483	ug/L	17.714	3	487	13847089	2
[	Co	59	5.801	ug/L	0.136	2	76	111660	1
[>	Ge	72		ug/L			608948	588382	2
[	Ni	60	14.813	ug/L	0.579	3	28	56294	2
[	Ni	62	15.582	ug/L	0.281	1	64	8529	2
[	Cu	63	17.469	ug/L	0.470	2	101	151035	0
[	Cu	65	18.192	ug/L	0.537	2	39	69286	1
[	Zn	66	194.533	ug/L	3.082	1	991	432643	1
[	Zn	67	182.149	ug/L	7.877	4	141	67818	2
[	Zn	68	192.522	ug/L	4.546	2	706	303267	0
[	As	75	12.347	ug/L	0.274	2	318	25674	0
[	As-1	75	12.558	ug/L	0.382	3	12623	37349	0
[	Se	82	0.027	ug/L	0.102	384	-10	-3	791
[	Se	78	0.181	ug/L	0.362	200	12864	12530	1
[	Mo	98	0.245	ug/L	0.002	0	28	1379	2
	Y	89		ug/L			406158	521271	2
	Kr	83		ug/L			794	1142	4
[>	In	115		ug/L			1093664	1072923	0
[	Ag	107	~0.143	ug/L	0.001	0	42	2178	0
[	Cd	111	3.644	ug/L	0.039	1	115	19252	0
[	Cd	114	3.602	ug/L	0.042	1	65	46623	1
[	Sb	121	0.142	ug/L	0.002	1	182	2358	1
[	Sb	123	0.140	ug/L	0.005	3	151	1783	3
[	Ba	135	163.628	ug/L	0.565	0	15	773257	0
[	Ba	137	161.643	ug/L	1.684	1	26	1326283	1
[>	Tb	159		ug/L			1253683	1234847	0
[	Tl	205	0.171	ug/L	0.002	1	128	6012	0
[	Pb	208	130.603	ug/L	1.302	0	347	5876303	0
[	Bi	209		ug/L			2594753	2464788	1
[	Th	232	4.858	ug/L	0.034	0	1408	217405	0
[	U	238	0.793	ug/L	0.010	1	31	37887	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 17:59:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			923208	890785	1
Be	9	0.508	ug/L	0.010	2	23	1625	0
C	13		ug/L			82469	125168	1
Cl	37		ug/L			4833777	4745491	4
> Sc	45		ug/L			1144296	1261798	0
V	51	33.387	ug/L	0.406	1	9450	791505	0
V-1	51	33.391	ug/L	0.430	1	48	783004	0
Cr	52	22.463	ug/L	0.373	1	27897	469656	1
Cr	53	22.562	ug/L	0.347	1	145	50352	1
Mn	55	521.687	ug/L	9.501	1	487	14173866	2
Co	59	7.582	ug/L	0.135	1	76	151580	1
> Ge	72		ug/L			608948	576196	1
Ni	60	16.737	ug/L	0.411	2	28	62306	1
Ni	62	18.748	ug/L	0.513	2	64	10038	2
Cu	63	23.964	ug/L	0.746	3	101	202887	1
Cu	65	24.085	ug/L	0.611	2	39	89833	1
Zn	66	199.832	ug/L	2.081	1	991	435212	0
Zn	67	193.043	ug/L	9.013	4	141	70390	3
Zn	68	200.310	ug/L	2.443	1	706	309040	0
As	75	9.679	ug/L	0.099	1	318	19778	0
As-1	75	9.876	ug/L	0.201	2	12623	31319	0
Se	82	0.052	ug/L	0.062	120	-10	2	530
Se	78	0.446	ug/L	0.376	84	12864	12419	0
Mo	98	0.347	ug/L	0.010	2	28	1902	3
Y	89		ug/L			406158	567714	0
Kr	83		ug/L			794	1151	3
> In	115		ug/L			1093664	1056704	1
Ag	107	0.182	ug/L	0.005	2	42	2709	3
Cd	111	3.596	ug/L	0.008	0	115	18717	1
Cd	114	3.559	ug/L	0.051	1	65	45365	0
Sb	121	0.156	ug/L	0.009	5	182	2544	3
Sb	123	0.158	ug/L	0.002	1	151	1958	0
Ba	135	164.115	ug/L	1.201	0	15	763766	1
Ba	137	165.914	ug/L	0.901	0	26	1340696	1
> Tb	159		ug/L			1253683	1220669	0
Tl	205	0.211	ug/L	0.003	1	128	7328	1
Pb	208	144.496	ug/L	0.922	0	347	6427070	0
Bi	209		ug/L			2594753	2438716	0
Th	232	6.301	ug/L	0.013	0	1408	278350	0
U	238	0.775	ug/L	0.004	0	31	36568	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 18:03:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	896396	2
	Be	9	0.471	ug/L	0.008	1	23	1516	1
	C	13		ug/L			82469	110371	2
	Cl	37		ug/L			4833777	4679567	2
>	Sc	45		ug/L			1144296	1276654	1
	V	51	43.781	ug/L	0.397	0	9450	1046775	1
	V-1	51	43.695	ug/L	0.536	1	48	1036538	0
	Cr	52	28.671	ug/L	0.427	1	27897	597875	1
	Cr	53	28.496	ug/L	0.655	2	145	64286	0
	Mn	55	574.462	ug/L	8.930	1	487	15788143	0
	Co	59	9.526	ug/L	0.242	2	76	192628	2
>	Ge	72		ug/L			608948	583525	1
	Ni	60	17.697	ug/L	0.118	0	28	66733	2
	Ni	62	20.036	ug/L	0.355	1	64	10858	0
	Cu	63	36.603	ug/L	0.705	1	101	313793	0
	Cu	65	38.071	ug/L	1.889	4	39	143730	3
	Zn	66	359.327	ug/L	6.481	1	991	791686	0
	Zn	67	336.675	ug/L	9.111	2	141	124239	1
	Zn	68	358.782	ug/L	12.794	3	706	559899	2
	As	75	19.905	ug/L	0.282	1	318	40866	0
	As-1	75	20.361	ug/L	0.420	2	12623	52547	0
	Se	82	0.085	ug/L	0.013	14	-10	10	26
	Se	78	0.502	ug/L	0.545	108	12864	12607	0
	Mo	98	0.275	ug/L	0.012	4	28	1531	2
	Y	89		ug/L			406158	555848	1
	Kr	83		ug/L			794	1186	2
>	In	115		ug/L			1093664	1103177 ✓	1
	Ag	107	0.220	ug/L	0.012	5	42	3412	5
	Cd	111	8.906	ug/L	0.210	2	115	48205	0
	Cd	114	8.877	ug/L	0.281	3	65	118019	1
	Sb	121	0.585	ug/L	0.010	1	182	9448	1
	Sb	123	0.583	ug/L	0.013	2	151	7150	1
	Ba	135	121.210	ug/L	1.861	1	15	588861	0
	Ba	137	120.341	ug/L	1.811	1	26	1015083	0
>	Tb	159		ug/L			1253683	1232452	1
	Tl	205	0.386	ug/L	0.005	1	128	13407	0
	Pb	208	384.557	ug/L	4.574	1	347	17267873	0
	Bi	209		ug/L			2594753	2451808	0
	Th	232	6.017	ug/L	0.053	0	1408	268430	0
	U	238	0.630	ug/L	0.010	1	31	30035	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 18:08:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	889612	0
	Be	9	0.520	ug/L	0.019	3	23	1659	3
	C	13		ug/L			82469	139592	0
	Cl	37		ug/L			4833777	4757676	3
>	Sc	45		ug/L			1144296	1236858	1
	V	51	27.941	ug/L	0.444	1	9450	650883	0
	V-1	51	27.978	ug/L	0.592	2	48	642991	0
	Cr	52	28.130	ug/L	0.362	1	27897	568895	1
	Cr	53	28.256	ug/L	0.712	2	145	61761	1
	Mn	55	785.695	ug/L	16.206	2	487	20926399	3
	Co	59	7.966	ug/L	0.222	2	76	156052	1
>	Ge	72		ug/L			608948	572866	1
	Ni	60	20.277	ug/L	0.331	1	28	75068	3
	Ni	62	21.905	ug/L	0.460	2	64	11649	0
	Cu	63	27.124	ug/L	0.287	1	101	228340	1
	Cu	65	27.876	ug/L	0.206	0	39	103382	0
	Zn	66	340.308	ug/L	5.711	1	991	736176	0
	Zn	67	313.651	ug/L	3.506	1	141	113667	1
	Zn	68	331.745	ug/L	3.299	0	706	508468	1
	As	75	11.838	ug/L	0.306	2	318	23980	1
	As-1	75	12.109	ug/L	0.437	3	12623	35490	0
	Se	82	0.125	ug/L	0.057	45	-10	20	65
	Se	78	0.553	ug/L	0.505	91	12864	12406	0
	Mo	98	0.339	ug/L	0.020	5	28	1843	4
	Y	89		ug/L			406158	560577	1
	Kr	83		ug/L			794	1118	0
>	In	115		ug/L			1093664	1066915	0
	Ag	107	0.175	ug/L	0.002	1	42	2643	1
	Cd	111	5.718	ug/L	0.106	1	115	29974	1
	Cd	114	5.594	ug/L	0.036	0	65	71969	0
	Sb	121	0.359	ug/L	0.003	0	182	5677	0
	Sb	123	0.360	ug/L	0.006	1	151	4327	1
	Ba	135	217.181	ug/L	1.936	0	15	1020532	0
	Ba	137	215.254	ug/L	3.707	1	26	1756099	0
>	Tb	159		ug/L			1253683	1223436	1
	Tl	205	0.277	ug/L	0.008	2	128	9577	1
	Pb	208	234.180	ug/L	3.918	1	347	10437910	0
	Bi	209		ug/L			2594753	2438571	1
	Th	232	5.860	ug/L	0.118	2	1408	259534	0
	U	238	0.815	ug/L	0.018	2	31	38558	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, November 19, 2012 18:12:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	894730	1
	Be	9	0.622	ug/L	0.007	1	23	1993	0
	C	13		ug/L			82469	116777	2
	Cl	37		ug/L			4833777	4787698	2
>	Sc	45		ug/L			1144296	1218079	1
	V	51	26.732	ug/L	0.901	3	9450	613531	1
	V-1	51	26.696	ug/L	0.818	3	48	604094	1
	Cr	52	21.566	ug/L	0.314	1	27897	436396	0
	Cr	53	21.484	ug/L	0.054	0	145	46294	1
	Mn	55	828.272	ug/L	7.593	0	487	21723318	2
	Co	59	9.234	ug/L	0.275	2	76	178133	1
>	Ge	72		ug/L			608948	576552	0
	Ni	60	22.065	ug/L	0.429	1	28	82201	2
	Ni	62	23.173	ug/L	0.357	1	64	12401	1
	Cu	63	23.828	ug/L	0.204	0	101	201913	0
	Cu	65	24.412	ug/L	0.307	1	39	91127	1
	Zn	66	190.455	ug/L	1.118	0	991	415132	1
	Zn	67	186.306	ug/L	0.863	0	141	68006	0
	Zn	68	190.185	ug/L	2.104	1	706	293648	0
	As	75	11.640	ug/L	0.140	1	318	23739	0
	As-1	75	11.884	ug/L	0.222	1	12623	35283	0
	Se	82	-0.106	ug/L	0.093	87	-10	-35	63
	Se	78	0.425	ug/L	0.298	70	12864	12416	0
	Mo	98	0.426	ug/L	0.002	0	28	2326	1
	Y	89		ug/L			406158	576893	0
	Kr	83		ug/L			794	1266	4
>	In	115		ug/L			1093664	1036269	2
	Ag	107	0.192	ug/L	0.012	6	42	2805	4
	Cd	111	2.924	ug/L	0.030	1	115	14942	1
	Cd	114	2.769	ug/L	0.069	2	65	34624	0
	Sb	121	0.176	ug/L	0.007	3	182	2794	1
	Sb	123	0.171	ug/L	0.004	2	151	2075	0
	Ba	135	185.335	ug/L	2.856	1	15	845746	0
	Ba	137	184.872	ug/L	5.651	3	26	1464447	1
>	Tb	159		ug/L			1253683	1217638	0
	Tl	205	0.208	ug/L	0.000	0	128	7176	0
	Pb	208	109.705	ug/L	0.259	0	347	4867516	0
	Bi	209		ug/L			2594753	2418033	1
	Th	232	7.016	ug/L	0.031	0	1408	309036	0
	U	238	1.046	ug/L	0.006	0	31	49252	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 18:16:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	853234 ✓	1
	Be	9	51.238	ug/L	0.408	0	23	154842	1
	C	13		ug/L			82469	82292	2
	Cl	37		ug/L			4833777	4601388	3
>	Sc	45		ug/L			1144296	1120549 ✓	2
	V	51	49.705	ug/L	0.698	1	9450	1041805	1
	V-1	51	49.787	ug/L	0.625	1	48	1036609	0
	Cr	52	49.654	ug/L	1.105	2	27897	888726	1
	Cr	53	49.928	ug/L	0.771	1	145	98764	0
	Mn	55	48.469	ug/L	0.749	1	487	1169731	1
	Co	59	48.704	ug/L	0.384	0	76	864306	2
>	Ge	72		ug/L			608948	570005 ✓	0
	Ni	60	49.885	ug/L	0.781	1	28	183679	1
	Ni	62	49.583	ug/L	0.735	1	64	26166	1
	Cu	63	49.560	ug/L	0.372	0	101	415094	1
	Cu	65	50.734	ug/L	1.205	2	39	187209	2
	Zn	66	49.810	ug/L	0.967	1	991	108015	1
	Zn	67	51.186	ug/L	0.498	0	141	18569	1
	Zn	68	50.939	ug/L	1.060	2	706	78239	1
	As	75	49.871	ug/L	0.730	1	318	99581	1
	As-1	75	50.003	ug/L	0.835	1	12623	108874	1
	Se	82	50.032	ug/L	0.804	1	-10	11817	1
	Se	78	50.587	ug/L	1.038	2	12864	39917	1
	Mo	98	48.672	ug/L	1.158	2	28	259897	1
	Y	89		ug/L			406158	380842	0
	Kr	83		ug/L			794	814	6
>	In	115		ug/L			1093664	1024319 ✓	0
	Ag	107	48.921	ug/L	0.831	1	42	697132	1
	Cd	111	50.390	ug/L	0.414	0	115	252794	0
	Cd	114	51.334	ug/L	0.762	1	65	633563	1
	Sb	121	50.918	ug/L	0.270	0	182	748313	1
	Sb	123	50.731	ug/L	0.900	1	151	565813	1
	Ba	135	50.369	ug/L	0.225	0	15	227251	0
	Ba	137	50.191	ug/L	0.700	1	26	393153	0
>	Tb	159		ug/L			1253683	1170124 ✓	0
	Tl	205	50.169	ug/L	0.707	1	128	1638140	1
	Pb	208	50.199	ug/L	0.165	0	347	2140581	1
	Bi	209		ug/L			2594753	2393173	0
	Th	232	53.443	ug/L	0.374	0	1408	2253297	0
	U	238	54.036	ug/L	0.667	1	31	2443190	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, November 19, 2012 18:23:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111912.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			923208	855504 ✓	3
	Be	9	-0.002	ug/L	0.001	24	23	14	14
	C	13		ug/L			82469	82602	4
	Cl	37		ug/L			4833777	4612890	1
>	Sc	45		ug/L			1144296	1092333 ✓	2
	V	51	-0.006	ug/L	0.014	237	9450	8894	0
	V-1	51	0.000	ug/L	0.000	35	48	54	7
	Cr	52	-0.017	ug/L	0.044	255	27897	26326	0
	Cr	53	0.005	ug/L	0.005	108	145	148	9
	Mn	55	0.007	ug/L	0.001	19	487	637	5
	Co	59	-0.000	ug/L	0.000	2331	76	72	7
>	Ge	72		ug/L			608948	555423 ✓	0
	Ni	60	0.001	ug/L	0.002	172	28	30	23
	Ni	62	-0.033	ug/L	0.005	16	64	41	6
	Cu	63	0.006	ug/L	0.001	19	101	142	6
	Cu	65	0.006	ug/L	0.002	25	39	59	10
	Zn	66	-0.274	ug/L	0.015	5	991	330	10
	Zn	67	-0.219	ug/L	0.018	8	141	52	12
	Zn	68	-0.246	ug/L	0.012	4	706	279	5
	As	75	0.040	ug/L	0.007	16	318	368	3
	As-1	75	0.240	ug/L	0.078	32	12623	11966	0
	Se	82	0.010	ug/L	0.056	546	-10	-6	189
	Se	78	0.820	ug/L	0.285	34	12864	12174	0
	Mo	98	0.004	ug/L	0.001	32	28	47	14
	Y	89		ug/L			406158	368114	1
	Kr	83		ug/L			794	800	3
>	In	115		ug/L			1093664	1006761 ✓	1
	Ag	107	0.000	ug/L	0.001	158	42	44	18
	Cd	111	-0.004	ug/L	0.002	43	115	85	9
	Cd	114	-0.001	ug/L	0.001	95	65	53	12
	Sb	121	0.041	ug/L	0.002	4	182	754	2
	Sb	123	0.041	ug/L	0.002	4	151	588	2
	Ba	135	0.004	ug/L	0.002	49	15	32	27
	Ba	137	0.005	ug/L	0.000	6	26	61	2
>	Tb	159		ug/L			1253683	1126705 ✓	2
	Tl	205	0.008	ug/L	0.005	59	128	356	38
	Pb	208	0.001	ug/L	0.001	75	347	346	7
	Bi	209		ug/L			2594753	2397956	0
	Th	232	0.078	ug/L	0.010	13	1408	4421	7
	U	238	0.002	ug/L	0.000	5	31	115	5

Mercury Analysis Log

Analyst: DM Date: 11-7-12

Instrument: CETAC Page: 1 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD 0.0	3MM	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			7.26	Begin CLP %R=91 ✓
ICB			-0.01	✓
CCV1			3.09	%R=92 ✓
CCB1			-0.00	✓
CRA			0.10	✓
VSIB MB1			0.01	✓
" MB1SPK			1.90	%R=95 ✓
" A			1.08	
" ADUP			1.05	RPD=2.81 ✓
" ASPK			2.04	%R=96 ✓
" B				
" C				
" D				
" E				
CCV2			3.05	%R=91 ✓
CCB2			0.00	✓
VSIB F				DER CVAOUT
" G				
" H				
" I				
" J				
" K				
" L	↓	↓		↓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391 14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2092-7 ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 2 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR37 MB1	5mm	1x	0.00	DEL CV out ✓
" MB1SPK			2.04	%R=102 ✓
" A			0.19	
CCV3			1.76	%R=44 LOW X
CCV4			3.63	%R=91 ✓
CCB3			0.00	✓
VS18 F				
" G				
" H				
" I				
" J				
" K				
" L				
VR37 MB1			0.01	✓
" MB1SPK			1.74	%R=87 ✓
" A			0.16	
CCV5			3.59	%R=90 ✓
CCB4			0.00	✓
VR37 ADUP			0.15	✓
" ASPK			1.12	%R=96 ✓
" B				
" C				
" D				
" E				
" F				
" G				
" H				
" I				
CCV6			3.60	%R=90 ✓
CCB5	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:

Standard: 2992-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM
Instrument: CETAC

Date: 11-7-12
Page: 3 of 10

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
VR57	J	SMM	1X		
"	K				
"	L				
"	M				
"	N				
"	O				
VR58	MBI			-0.00	✓
"	MBISPK			1.81	%R=91 ✓
"	A			0.11	
"	AOUP			0.10	✓
CCV7				3.64	%R=91 ✓
CCB6				0.00	✓
VR58	ASPK			1.07	%R=96 ✓
"	B				
"	C				
"	D				
"	E				
"	F				
"	G				
"	H				
"	I				
"	J				
CCV8				3.61	%R=90 ✓
CCB7				-0.00	✓
VR82	A				
"	B				
"	C				
"	D				
"	E				
"	F	↓	↓		

Chemical/Reagent ID:
10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2340

Standard ID:
Standard: 2992-7

ICV/CCV: SL-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 4 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR82 G	SMM	1x		
" H				
" I				
CCV9			3.56	%R=89 ✓
CCB8			0.00	✓
VR30 MB1			-0.00	✓
" MB1SPK			1.82	%R=91 ✓
" A			0.92	
" ADUP			0.93	RPD=1.08 ✓
" ASPK			1.78	%R=86 ✓
" B				
" C				
" D				
" E				
" F				
CCV10			3.71	%R=93 ✓
CCB9			-0.00	✓
VR30 G				
" H				
" I				
" J				
" K				
" L				
VR36 MB1			0.00	✓
" MB1SPK			1.89	%R=95 ✓
" A			0.77	
" ADUP			0.74	RPD=3.97 ✓
CCV11			3.72	%R=93 ✓
CCB10			0.00	✓
VR36 ASPK	↓	↓	1.72	%R=95 ✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 5 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR36 B	SMM	1X		
" C				
" D				
" E				
" F				
" G				
" H				
" I				
" J				
CCV12			3.66	%R=92 ✓
CCB11			-0.00	✓
VR36 K				
" L				
VR35 MB1			0.00	✓
" MB1SPK			1.84	%R=92 ✓
" A			0.34	
" ADUP			0.34	✓
" ASPK			1.29	%R=95 ✓
" B				
" C				
" D				
CCV13			3.61	%R=90 ✓
CCB12			-0.03	✓
VR35 E				
" F				
" G				
" H				
" I				
" J				
" K	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 29927

ICV/CCV: 56-18

Mercury Analysis Log

Analyst: DM
Date: 11-17-12
Instrument: CETAC
Page: 6 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR35 L	SMM	1X		
CCV14			3.55	%R=89 ✓
CCB13			-0.00	✓
VR32 MB1			0.01	✓
" MBSPK			1.79	%R=90 ✓
" A			0.47	
" ADUP			0.44	✓
" ASPK			1.37	%R=90 ✓
" B				
" C				
" D				
" E				
" F				
CCV15			3.45	%R=86 ✓
CCB14			-0.00	✓
VR32 G				
" H				
" I				
" J				
" K				
" L				
VR65 MB1			0.03	✓
" MB1SPK			1.74	%R=87 ✓
" A			1.22	
" ADUP			1.18	RPD=3.33 ✓
CCV16			3.54	%R=89 ✓
CCB15			0.00	✓
VR65 ASPK			2.08	%R=86 ✓
" B				
" C				

Chemical/Reagent ID:
10% $SnCl_2$: MP2591
14% $NH_2OH/NaCl$: MP2360

Standard ID:
Standard: 2992-7
ICV/CCV: 56-13

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 7 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VRL5 D	SMM	1X		
" E				
" F				
" G				
" H				
" I				
" J				
CCV17			3.46	%R=87 ✓
CCB16			0.00	✓
VRL5 K				
" L				
VR38 MB1			0.01	✓
" MB1SPK			1.64	%R=82 ✓
" A			0.02	
" ADUP			0.03	NO RPD: Undetected ✓
" ASPK			0.86	%R=86 ✓
" B				
" C				
" D				
CCV18			3.65	%R=91 ✓
CCB17			0.00	✓
VR38 E				
" F				
" G				
" H				
" I				
" J				
" K				
CCV19 K DM 11-17-12			3.69	%R=92 ✓
CCB18	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2360

Standard ID:

Standard: 2992-7

ICV/CCV: 5L-18

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 11-17-12

Page: 8 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR33 MB1	5mm	1X	0.01	✓
" MBSPK			1.83	✓
" A			1.41	
" ADUP			1.38	RPD=2.15 ✓
" ASPK			2.15	%R=74 LOW X
" B				
" C				
" D				
" E				
" F				
CCV20			3.41	%R=90 ✓
CCB19			0.00	✓
VR33 G				
" H				
" I				
" J				
" K				
" L				
VR34 MB1			0.01	✓
" MBISPK			1.72	%R=86 ✓
" A			1.98	
" ADUP			1.90	RPD=4.12 ✓
CCV21			3.61	%R=90 ✓
CCB20			0.03	✓
VR34 ASPK			2.87	%R=89 ✓
" B				
" C				
" D				
" E				
" F				

Chemical/Reagent ID:

10% $SnCl_2$: MP2391

14% NH_2OH/NaCl: MP2320

Standard ID:

Standard: 2992-7

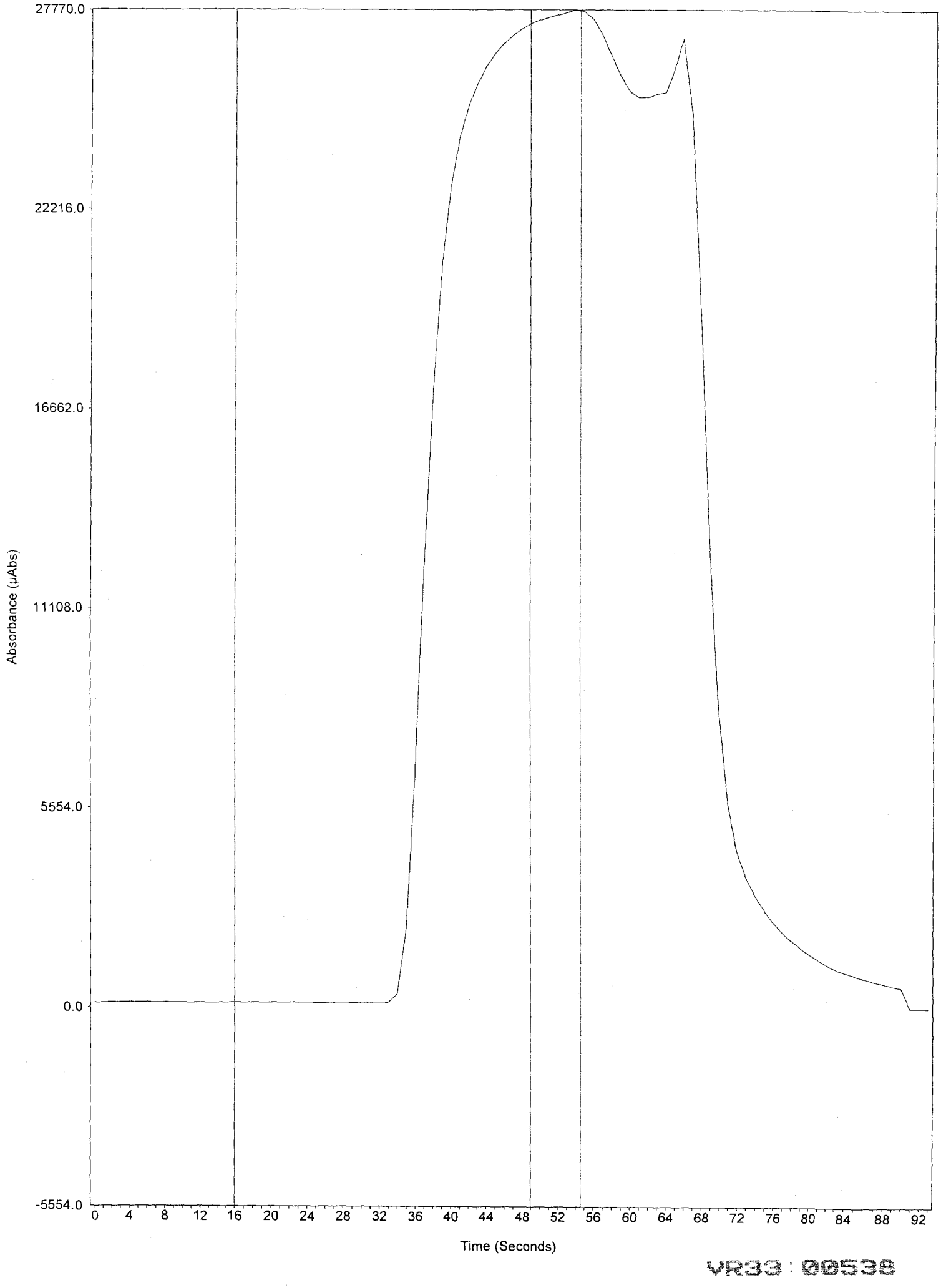
ICV/CCV: 56-18

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 11-17-12

	Analyst 11-17 DM	Peer #11-19	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓		
Calibration Verification:			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See VR33 ASPK
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	See CAF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22216.0
16662.0
11108.0
5554.0
0.0
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Absorbance (µAbs)
0
4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)
VR33:00538

CETAC Hg Analysis Report - 12111700.DB - Saturday, November 17, 2012, 2:36:51 PM

✓ 11-19-12 KS

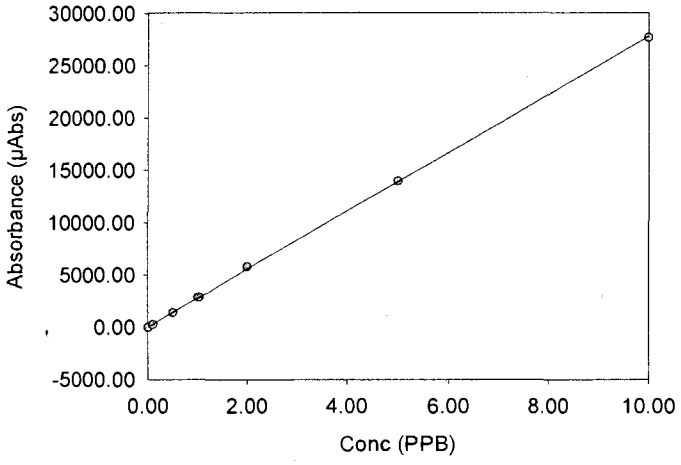
Analyst
Date Started Saturday, November 17, 2012, 06:44:12
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	17-Nov-2012, 06:44	10.00	0.46	27500.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	17-Nov-2012, 06:46	0.00	4.58	-33.10	1.00	
Standard #1	17-Nov-2012, 06:47	0.10	0.53	261.00	1.00	
Standard #2	17-Nov-2012, 06:49	0.50	0.24	1400.00	1.00	
Standard #3	17-Nov-2012, 06:51	1.00	0.45	2840.00	1.00	
Standard #4	17-Nov-2012, 06:52	2.00	0.54	5790.00	1.00	
Standard #5	17-Nov-2012, 06:54	5.00	0.29	14000.00	1.00	
Standard #6	17-Nov-2012, 06:56	10.00	0.39	27700.00	1.00	

Calibration Data



Int.	0.000
Slope	2778.015
Correlation	0.99994

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	17-Nov-2012, 07:05	7.26	0.75	20200.00	1.00	
ICB	17-Nov-2012, 07:06	-0.01	13.00	-18.40	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:08	3.69	0.28	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:09	-0.00	56.00	-2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	17-Nov-2012, 07:11	0.10	0.42	267.00	1.00	
VS18 MB1 SMM	17-Nov-2012, 07:13	0.01	13.00	20.30	1.00	
VS18 MB1SPK SMM	17-Nov-2012, 07:14	1.90	0.60	5270.00	1.00	
VS18 A SMM	17-Nov-2012, 07:16	1.08	0.64	3000.00	1.00	
VS18 ADUP SMM	17-Nov-2012, 07:17	1.05	0.46	2910.00	1.00	
VS18 ASPK SMM	17-Nov-2012, 07:19	2.04	0.80	5660.00	1.00	
VS18 B SMM	17-Nov-2012, 07:21	0.70	0.68	1940.00	1.00	
VS18 C SMM	17-Nov-2012, 07:22	0.59	0.86	1640.00	1.00	
VS18 D SMM	17-Nov-2012, 07:24	0.77	0.48	2150.00	1.00	
VS18 E SMM	17-Nov-2012, 07:26	0.71	0.45	1970.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:27	3.65	0.49	10100.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 07:29:22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:29	0.00	11.10	10.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 07:31	0.31	1.08	873.00	1.00	
VS18 G SMM	17-Nov-2012, 07:32	0.25	0.62	691.00	1.00	
VS18 H SMM	17-Nov-2012, 07:34	1.02	1.42	2840.00	1.00	
VS18 I SMM	17-Nov-2012, 07:35	3.94	0.68	10900.00	1.00	
VS18 J SMM	17-Nov-2012, 07:37	2.53	0.19	7030.00	1.00	
VS18 K SMM	17-Nov-2012, 07:38	1.94	0.22	5380.00	1.00	
VS18 L SMM	17-Nov-2012, 07:40	0.88	0.27	2440.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 07:42	0.00	17.70	12.90	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 07:43	2.04	0.47	5660.00	1.00	
VR37 A SMM	17-Nov-2012, 07:45	0.19	0.58	514.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:47	1.76	0.86	4880.00	1.00	Q - Low %R
QC Standard	17-Nov-2012, 07:58	3.63	0.54	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:00	0.00	11.60	11.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 08:02	0.30	0.58	846.00	1.00	
VS18 G SMM	17-Nov-2012, 08:03	0.25	0.72	683.00	1.00	
VS18 H SMM	17-Nov-2012, 08:05	1.00	0.78	2780.00	1.00	
VS18 I SMM	17-Nov-2012, 08:06	3.88	0.67	10800.00	1.00	
VS18 J SMM	17-Nov-2012, 08:08	2.42	0.57	6730.00	1.00	
VS18 K SMM	17-Nov-2012, 08:09	1.81	0.67	5030.00	1.00	
VS18 L SMM	17-Nov-2012, 08:11	0.79	0.94	2190.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 08:13	0.01	4.00	19.20	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 08:14	1.74	0.56	4840.00	1.00	
VR37 A SMM	17-Nov-2012, 08:16	0.16	1.44	442.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:18	3.59	0.50	9980.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:19	0.00	13.00	9.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 ADUP SMM	17-Nov-2012, 08:21	0.15	0.54	416.00	1.00	
VR37 ASPK SMM	17-Nov-2012, 08:23	1.12	0.62	3120.00	1.00	
VR37 B SMM	17-Nov-2012, 08:24	0.09	0.36	242.00	1.00	
VR37 C SMM	17-Nov-2012, 08:26	0.28	1.03	768.00	1.00	
VR37 D SMM	17-Nov-2012, 08:27	1.41	0.61	3910.00	1.00	
VR37 E SMM	17-Nov-2012, 08:29	2.23	0.82	6190.00	1.00	
VR37 F SMM	17-Nov-2012, 08:31	0.79	0.67	2210.00	1.00	
VR37 G SMM	17-Nov-2012, 08:32	2.39	0.51	6630.00	1.00	
VR37 H SMM	17-Nov-2012, 08:34	3.87	0.37	10800.00	1.00	
VR37 I SMM	17-Nov-2012, 08:35	0.48	0.20	1340.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:37	3.60	0.66	9990.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:39	0.00	124.00	1.77	1.00	

Analyst
Date Started Saturday, November 17, 2012, 08:40:49
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 J SMM	17-Nov-2012, 08:40	1.27	0.51	3520.00	1.00	
VR37 K SMM	17-Nov-2012, 08:42	1.51	2.55	4190.00	1.00	
VR37 L SMM	17-Nov-2012, 08:44	1.16	0.58	3220.00	1.00	
VR37 M SMM	17-Nov-2012, 08:45	1.05	0.38	2900.00	1.00	
VR37 N SMM	17-Nov-2012, 08:47	1.19	0.74	3310.00	1.00	
VR37 O SMM	17-Nov-2012, 08:48	0.83	0.81	2300.00	1.00	
VR58 MB1 SMM	17-Nov-2012, 08:50	-0.00	33.50	-6.40	1.00	
VR58 MB1SPK SMM	17-Nov-2012, 08:52	1.81	0.54	5040.00	1.00	
VR58 A SMM	17-Nov-2012, 08:53	0.11	0.89	295.00	1.00	
VR58 ADUP SMM	17-Nov-2012, 08:55	0.10	0.57	281.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:56	3.64	0.48	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:58	0.00	9.27	8.18	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR58 ASPK SMM	17-Nov-2012, 09:00	1.07	0.63	2970.00	1.00	
VR58 B SMM	17-Nov-2012, 09:01	0.10	0.59	283.00	1.00	
VR58 C SMM	17-Nov-2012, 09:03	0.11	0.53	309.00	1.00	
VR58 D SMM	17-Nov-2012, 09:05	0.10	0.66	274.00	1.00	
VR58 E SMM	17-Nov-2012, 09:06	0.11	0.48	304.00	1.00	
VR58 F SMM	17-Nov-2012, 09:08	0.41	0.62	1150.00	1.00	
VR58 G SMM	17-Nov-2012, 09:10	0.06	0.39	175.00	1.00	
VR58 H SMM	17-Nov-2012, 09:11	0.06	0.63	161.00	1.00	
VR58 I SMM	17-Nov-2012, 09:13	0.10	1.03	271.00	1.00	
VR58 J SMM	17-Nov-2012, 09:14	0.05	1.41	126.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:16	3.61	0.66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:18	-0.00	300.00	-1.14	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR82 A SMM	17-Nov-2012, 09:19	0.22	0.73	605.00	1.00	
VR82 B SMM	17-Nov-2012, 09:21	0.10	2.50	265.00	1.00	
VR82 C SMM	17-Nov-2012, 09:23	0.08	1.51	214.00	1.00	
VR82 D SMM	17-Nov-2012, 09:24	0.11	1.66	312.00	1.00	
VR82 E SMM	17-Nov-2012, 09:26	0.15	0.65	428.00	1.00	
VR82 F SMM	17-Nov-2012, 09:28	0.16	0.78	453.00	1.00	
VR82 G SMM	17-Nov-2012, 09:29	0.13	0.84	355.00	1.00	
VR82 H SMM	17-Nov-2012, 09:31	0.12	0.60	343.00	1.00	
VR82 I SMM	17-Nov-2012, 09:32	0.12	0.86	328.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:34	3.56	0.61	9900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:36	0.00	42.80	6.11	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 MB1 SMM	17-Nov-2012, 09:38	-0.00	64.10	-2.94	1.00	
VR30 MB1SPK SMM	17-Nov-2012, 09:39	1.82	0.61	5060.00	1.00	
VR30 A SMM	17-Nov-2012, 09:41	0.92	0.74	2550.00	1.00	
VR30 ADUP SMM	17-Nov-2012, 09:43	0.93	0.60	2590.00	1.00	
VR30 ASPK SMM	17-Nov-2012, 09:44	1.78	0.74	4940.00	1.00	
VR30 B SMM	17-Nov-2012, 09:46	0.58	0.75	1620.00	1.00	
VR30 C SMM	17-Nov-2012, 09:47	0.68	0.60	1890.00	1.00	
VR30 D SMM	17-Nov-2012, 09:49	0.80	0.75	2230.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 09:51:06
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 E SMM	17-Nov-2012, 09:51	0.55	0.51	1540.00	1.00	
VR30 F SMM	17-Nov-2012, 09:52	0.67	0.54	1860.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 09:54	3.71	0.80	10300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 09:56	-0.00	235.00	-1.21	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR30 G SMM	17-Nov-2012, 09:57	0.82	0.55	2280.00	1.00	
VR30 H SMM	17-Nov-2012, 09:59	0.58	0.47	1610.00	1.00	
VR30 I SMM	17-Nov-2012, 10:00	0.60	1.07	1670.00	1.00	
VR30 J SMM	17-Nov-2012, 10:02	0.53	3.49	1480.00	1.00	
VR30 K SMM	17-Nov-2012, 10:04	0.67	0.52	1870.00	1.00	
VR30 L SMM	17-Nov-2012, 10:05	0.81	0.51	2260.00	1.00	
VR36 MB1 SMM	17-Nov-2012, 10:07	0.00	24.00	6.55	1.00	
VR36 MB1SPK SMM	17-Nov-2012, 10:08	1.89	0.89	5240.00	1.00	
VR36 A SMM	17-Nov-2012, 10:10	0.77	0.47	2130.00	1.00	
VR36 ADUP SMM	17-Nov-2012, 10:12	0.74	0.37	2050.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:13	3.72	0.44	10300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:15	0.00	103.00	2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 ASPK SMM	17-Nov-2012, 10:17	1.72	0.45	4770.00	1.00	
VR36 B SMM	17-Nov-2012, 10:18	2.59	0.47	7210.00	1.00	
VR36 C SMM	17-Nov-2012, 10:20	1.64	0.64	4540.00	1.00	
VR36 D SMM	17-Nov-2012, 10:22	1.79	0.44	4980.00	1.00	
VR36 E SMM	17-Nov-2012, 10:23	0.37	0.51	1040.00	1.00	
VR36 F SMM	17-Nov-2012, 10:25	0.18	0.87	511.00	1.00	
VR36 G SMM	17-Nov-2012, 10:26	0.13	0.85	371.00	1.00	
VR36 H SMM	17-Nov-2012, 10:28	1.34	0.57	3710.00	1.00	
VR36 I SMM	17-Nov-2012, 10:30	1.20	0.50	3330.00	1.00	
VR36 J SMM	17-Nov-2012, 10:31	1.04	0.35	2890.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:33	3.66	0.32	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:34	-0.00	6.61	-7.46	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR36 K SMM	17-Nov-2012, 10:36	2.70	0.46	7500.00	1.00	
VR36 L SMM	17-Nov-2012, 10:38	0.27	0.35	752.00	1.00	
VR35 MB1 SMM	17-Nov-2012, 10:39	0.00	17.80	8.76	1.00	
VR35 MB1SPK SMM	17-Nov-2012, 10:41	1.84	0.58	5120.00	1.00	
VR35 A SMM	17-Nov-2012, 10:43	0.34	0.50	941.00	1.00	
VR35 ADUP SMM	17-Nov-2012, 10:44	0.34	0.37	935.00	1.00	
VR35 ASPK SMM	17-Nov-2012, 10:46	1.29	0.57	3580.00	1.00	
VR35 B SMM	17-Nov-2012, 10:48	0.42	0.73	1160.00	1.00	
VR35 C SMM	17-Nov-2012, 10:49	0.07	1.65	193.00	1.00	
VR35 D SMM	17-Nov-2012, 10:51	0.06	0.49	162.00	1.00	

Analyst
Date Started Saturday, November 17, 2012, 10:52:53
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 10:52	3.61	0.66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 10:54	-0.03	5.41	-77.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR35 E SMM	17-Nov-2012, 10:56	0.23	0.62	648.00	1.00	
VR35 F SMM	17-Nov-2012, 10:57	1.55	0.66	4300.00	1.00	
VR35 G SMM	17-Nov-2012, 10:59	1.46	0.62	4060.00	1.00	
VR35 H SMM	17-Nov-2012, 11:01	0.41	0.48	1140.00	1.00	
VR35 I SMM	17-Nov-2012, 11:02	1.17	1.09	3260.00	1.00	
VR35 J SMM	17-Nov-2012, 11:04	0.93	0.51	2590.00	1.00	
VR35 K SMM	17-Nov-2012, 11:06	1.11	0.64	3080.00	1.00	
VR35 L SMM	17-Nov-2012, 11:07	1.31	0.58	3630.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:09	3.55	0.50	9850.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:11	-0.00	33.50	-2.69	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 MB1 SMM	17-Nov-2012, 11:13	0.01	3.64	20.40	1.00	
VR32 MB1SPK SMM	17-Nov-2012, 11:14	1.79	0.83	4960.00	1.00	
VR32 A SMM	17-Nov-2012, 11:16	0.47	0.63	1300.00	1.00	
VR32 ADUP SMM	17-Nov-2012, 11:17	0.44	0.66	1220.00	1.00	
VR32 ASPK SMM	17-Nov-2012, 11:19	1.37	0.54	3810.00	1.00	
VR32 B SMM	17-Nov-2012, 11:21	0.82	0.58	2280.00	1.00	
VR32 C SMM	17-Nov-2012, 11:22	0.31	0.79	871.00	1.00	
VR32 D SMM	17-Nov-2012, 11:24	0.43	0.58	1200.00	1.00	
VR32 E SMM	17-Nov-2012, 11:25	0.50	0.71	1390.00	1.00	
VR32 F SMM	17-Nov-2012, 11:27	0.39	0.77	1080.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:29	3.45	0.56	9570.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:30	-0.00	49.10	-3.41	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR32 G SMM	17-Nov-2012, 11:32	0.31	0.19	870.00	1.00	
VR32 H SMM	17-Nov-2012, 11:34	0.24	0.61	659.00	1.00	
VR32 I SMM	17-Nov-2012, 11:35	0.25	0.45	692.00	1.00	
VR32 J SMM	17-Nov-2012, 11:37	0.17	0.58	483.00	1.00	
VR32 K SMM	17-Nov-2012, 11:38	0.37	0.81	1020.00	1.00	
VR32 L SMM	17-Nov-2012, 11:40	2.05	0.61	5700.00	1.00	
VR65 MB1 SMM	17-Nov-2012, 11:42	0.03	1.01	82.40	1.00	
VR65 MB1SPK SMM	17-Nov-2012, 11:43	1.74	0.69	4820.00	1.00	
VR65 A SMM	17-Nov-2012, 11:45	1.22	0.84	3390.00	1.00	
VR65 ADUP SMM	17-Nov-2012, 11:46	1.18	0.77	3290.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 11:48	3.54	0.50	9830.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 11:50	0.00	38.40	2.95	1.00	

Analyst
Date Started Saturday, November 17, 2012, 11:51:52
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR65 ASPK SMM	17-Nov-2012, 11:51	2.08	0.62	5780.00	1.00	
VR65 B SMM	17-Nov-2012, 11:53	1.01	0.72	2810.00	1.00	
VR65 C SMM	17-Nov-2012, 11:55	0.57	0.33	1590.00	1.00	
VR65 D SMM	17-Nov-2012, 11:56	1.38	0.44	3830.00	1.00	
VR65 E SMM	17-Nov-2012, 11:58	0.62	0.57	1710.00	1.00	
VR65 F SMM	17-Nov-2012, 11:59	0.15	0.48	430.00	1.00	
VR65 G SMM	17-Nov-2012, 12:01	0.66	0.75	1850.00	1.00	
VR65 H SMM	17-Nov-2012, 12:03	1.49	0.49	4150.00	1.00	
VR65 I SMM	17-Nov-2012, 12:04	0.94	0.57	2620.00	1.00	
VR65 J SMM	17-Nov-2012, 12:06	0.33	0.59	923.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:08	3.46	0.61	9620.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:09	0.00	19.40	6.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR65 K SMM	17-Nov-2012, 12:11	0.82	0.46	2270.00	1.00	
VR65 L SMM	17-Nov-2012, 12:12	0.01	6.57	28.80	1.00	
VR38 MB1 SMM	17-Nov-2012, 12:14	0.01	9.72	16.80	1.00	
VR38 MB1SPK SMM	17-Nov-2012, 12:16	1.64	0.46	4560.00	1.00	
VR38 A SMM	17-Nov-2012, 12:17	0.02	1.49	62.50	1.00	
VR38 ADUP SMM	17-Nov-2012, 12:19	0.03	4.02	73.90	1.00	
VR38 ASPK SMM	17-Nov-2012, 12:21	0.86	0.81	2400.00	1.00	
VR38 B SMM	17-Nov-2012, 12:22	0.04	2.90	113.00	1.00	
VR38 C SMM	17-Nov-2012, 12:24	0.09	1.73	248.00	1.00	
VR38 D SMM	17-Nov-2012, 12:25	0.62	0.51	1720.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:27	3.65	0.73	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:29	0.00	34.90	3.76	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR38 E SMM	17-Nov-2012, 12:30	0.03	1.86	89.20	1.00	
VR38 F SMM	17-Nov-2012, 12:32	0.06	0.77	165.00	1.00	
VR38 G SMM	17-Nov-2012, 12:34	0.07	0.74	181.00	1.00	
VR38 H SMM	17-Nov-2012, 12:35	0.04	2.13	112.00	1.00	
VR38 I SMM	17-Nov-2012, 12:37	0.04	2.85	103.00	1.00	
VR38 J SMM	17-Nov-2012, 12:39	0.08	1.09	209.00	1.00	
VR38 K SMM	17-Nov-2012, 12:40	0.05	1.89	137.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 12:42	3.69	0.38	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 12:44	0.00	13.10	11.50	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR33 MB1 SMM	17-Nov-2012, 12:46	0.01	6.76	21.20	1.00	
VR33 MB1SPK SMM	17-Nov-2012, 12:48	1.83	0.58	5070.00	1.00	
VR33 A SMM	17-Nov-2012, 12:49	1.41	0.59	3920.00	1.00	
VR33 ADUP SMM	17-Nov-2012, 12:51	1.38	0.56	3820.00	1.00	
VR33 ASPK SMM	17-Nov-2012, 12:52	2.15	0.53	5980.00	1.00	- LOW %R
VR33 B SMM	17-Nov-2012, 12:54	0.73	0.47	2030.00	1.00	
VR33 C SMM	17-Nov-2012, 12:55	1.77	0.52	4930.00	1.00	
VR33 D SMM	17-Nov-2012, 12:57	0.79	0.75	2190.00	1.00	
VR33 E SMM	17-Nov-2012, 12:59	0.96	0.59	2680.00	1.00	
VR33 F SMM	17-Nov-2012, 13:00	0.51	0.95	1420.00	1.00	

VR33 : 00544

Analyst
Date Started Saturday, November 17, 2012, 13:02:29
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:02	3.61	0.72	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:04	0.00	67.40	2.71	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR33 G SMM	17-Nov-2012, 13:05	0.17	0.17	483.00	1.00	
VR33 H SMM	17-Nov-2012, 13:07	0.13	0.37	359.00	1.00	
VR33 I SMM	17-Nov-2012, 13:09	0.71	0.50	1960.00	1.00	
VR33 J SMM	17-Nov-2012, 13:10	1.13	0.60	3150.00	1.00	
VR33 K SMM	17-Nov-2012, 13:12	1.02	0.57	2830.00	1.00	
VR33 L SMM	17-Nov-2012, 13:13	0.55	0.33	1530.00	1.00	
VR34 MB1 SMM	17-Nov-2012, 13:15	0.01	6.11	19.70	1.00	
VR34 MB1SPK SMM	17-Nov-2012, 13:17	1.72	0.56	4790.00	1.00	
VR34 A SMM	17-Nov-2012, 13:18	1.98	0.47	5490.00	1.00	
VR34 ADUP SMM	17-Nov-2012, 13:20	1.90	0.52	5270.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:21	3.61	0.45	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:23	0.03	5.22	77.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR34 ASPK SMM	17-Nov-2012, 13:25	2.87	0.56	7960.00	1.00	
VR34 B SMM	17-Nov-2012, 13:26	1.07	0.60	2960.00	1.00	
VR34 C SMM	17-Nov-2012, 13:28	0.73	0.44	2020.00	1.00	
VR34 D SMM	17-Nov-2012, 13:30	1.43	0.42	3980.00	1.00	
VR34 E SMM	17-Nov-2012, 13:31	1.22	0.67	3400.00	1.00	
VR34 F SMM	17-Nov-2012, 13:33	1.11	0.54	3070.00	1.00	
VR34 G SMM	17-Nov-2012, 13:34	1.63	0.49	4530.00	1.00	
VR34 H SMM	17-Nov-2012, 13:36	0.79	0.41	2180.00	1.00	
VR34 I SMM	17-Nov-2012, 13:38	1.33	0.50	3710.00	1.00	
VR34 J SMM	17-Nov-2012, 13:39	1.13	0.53	3150.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 13:41	3.69	0.67	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 13:43	0.00	13.50	6.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR34 K SMM	17-Nov-2012, 13:44	1.28	0.66	3550.00	1.00	
VR34 L SMM	17-Nov-2012, 13:46	0.37	0.33	1030.00	1.00	
VR31 MB1 SMM	17-Nov-2012, 13:47	0.00	10.60	11.90	1.00	
VR31 MB1SPK SMM	17-Nov-2012, 13:49	1.82	0.63	5050.00	1.00	
VR31 A SMM	17-Nov-2012, 13:51	0.69	0.33	1900.00	1.00	
VR31 ADUP SMM	17-Nov-2012, 13:52	0.70	0.48	1930.00	1.00	
VR31 ASPK SMM	17-Nov-2012, 13:54	1.53	0.71	4240.00	1.00	
VR31 B SMM	17-Nov-2012, 13:56	0.86	0.72	2400.00	1.00	
VR31 C SMM	17-Nov-2012, 13:57	0.57	0.75	1570.00	1.00	
VR31 D SMM	17-Nov-2012, 13:59	0.28	0.72	788.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 14:00	3.62	0.44	10100.00	1.00	

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SMM Instrument: CETAC
Analyst: DM Date: 11-15-12
Bath Temp: 95°C Start Time: 1213 End Time: 1243

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	2992-7	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	5616	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: IT833 H_2SO_4: I1677 HCl: —
5% $K_2S_8O_8$: MP2375 5% $KMnO_4$: MP2376

Prep Code: TLM Digested 20.0mL Instrument: CETAC
Analyst: DM Date: 11-15-12
Bath Temp: 95°C Start Time: 1247 End Time: 1447

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	2992-8	0.02	↓	0.02	1
STD2	↓	0.05	↓	0.05	1
STD3	↓	0.10	↓	0.1	1
STD4	↓	0.20	↓	0.2	1
STD5	↓	~~0.50~~ 0.4	↓	0.4	1
STD6	↓	1.00	↓	1.00	1
CRA	↓	0.02	↓	0.02	1
ICB/CCB	—	0.00	↓	0.0	1
ICV/LCS	2992-9	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:
HNO_3: IT833 H_2SO_4: I1677 HCl: —
5% $K_2S_8O_8$: MP2375 5% $KMnO_4$: MP2376

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 3MM Matrix: Soil
Analyst: DM Date: 11-14-12
Bath Temp: 95°C Start Time: 1355 End Time: 1405

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR33 A	1	—	0.703	50.0	n/a 1	(Y)	
" AOUP	1	—	0.706		1		
" ASPK	1	—	0.702		1		
" B	1	—	0.739		1		
" C	1	—	0.746		1		
" D	1	—	0.712		1		
" E	1	—	0.729		1		
" F	1	—	0.738		1		
" G	1	—	0.746		1		
" H	1	—	0.719		1		
" I	1	—	0.737		1		
" J	1	—	0.723		1		
" K	1	—	0.721		1		
" L	1	—	0.725		1		
" MB1	—	—	—		1		
" MB1SPK	—	—	—	50.0	1	(Y)	
			11-14-12	DM			

Chemical/Reagent ID:

HNO_3: I7833 H_2SO_4: I7677 HCl: —

5% $K_2S_2O_8$: MP2375 5% $KMnO_4$: MP2376 Digest Tube Lot: 1205268

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR33

W
11-15-1

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

DATE: 11/12/12 (C)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

ANALYST: KE 18:31

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time	*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm	*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
11/12/2012 18:31 date/time in oven	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
11/13/2012 9:58 date/time out		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs = 15.5		*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	11/12/12 17:24 KE	11/12/12 18:09 KE	11/13/12 10:12 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0952	1.0950			0.00							
VR31 I 1		6.0678	1.1028	5.8541			4.75	95.7%						
VR31 I 1 dup		6.0649	1.1166	5.9694			4.85	98.1%						
							RPD =	2.45%				RPD =	NA	
VR31 I 1 trp		6.1533	1.0929	6.0624			4.97	98.2%						
							RSD =	1.45%				RSD =	NA	
VR31 J 1		6.1942	1.0727	6.1138			5.04	98.4%						
VR31 K1		6.5827	1.1017	6.4743			5.37	98.0%						
VR31 L1		6.5713	1.0866	6.4299			5.34	97.4%						
VR32 A1		6.3546	1.0866	6.2210			5.13	97.6%						
VR32 B1		6.3523	1.0839	6.2392			5.16	97.9%						
VR32 C1		6.8896	1.0895	6.7346			5.65	97.3%						
VR32 D1		6.7523	1.0915	6.6132			5.52	97.6%						
VR32 E1		6.0662	1.0804	5.9423			4.86	97.6%						
VR32 F1		6.7568	1.0869	6.6309			5.54	97.6%						
VR32 G1		6.3739	1.1179	6.2795			5.16	98.2%						
VR32 H1		6.1536	1.0917	6.0659			4.97	98.3%						
VR32 I 1		6.4752	1.0813	6.3960			5.31	98.5%						
CR32 J 1		6.6287	1.0750	6.5857			5.51	98.2%						
VR32 K1		6.0090	1.1221	5.9324			4.81	98.4%						
VR32 L1		6.0870	1.0999	5.8111			4.71	94.5%						
VR33 A1		5.6487	1.0842	5.4535			4.37	95.7%						
VR33 B1		6.7026	1.0885	6.5715			5.48	97.7%						
VR33 C1		5.3763	1.0903	5.1571			4.07	94.9%						
VR33 D1		6.6028	1.1121	6.4991			5.39	98.1%						

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(1) 11-12-12 (W) (2)

Analyst: (W)	Date: 11-12-12	Oven ID:	Balance ID: 1123230597
Time in Oven: 18:31	Time Out of Oven: 9:58	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight ≤ 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02 10:12	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		11-12-12 17:34	11-12-12 19:09	11-13-12 (1)						
Cal Weight (10.0000):		10.0000 (W)	10.0000 (W)	10.0000 (W)						
				Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
Sample ID	Dish #	Sample	Tare	1	2	3	grams	1	2	3
BLANK	24	~~1.0952~~	1.0952	1.0950						
VR31 I'	25	6.0678	1.1028	5.8541						
I''	26	6.0649	1.1166	5.9694						
I'''	27	6.1533	1.0929	~~5.0~~ (1)	6.0624					
J'	28	6.1942	1.0727	6.1138						
K'	29	6.5827	1.1017	6.4743						
L'	30	6.5713	1.0866	6.4299						
VR32 A'	31	6.3546	1.0866	6.2210						
B'	32	6.3523	1.0839	6.2392						
C'	33	6.8816	1.0895	6.7346						
D'	34	6.7523	1.0915	6.6132						
E'	35	6.0662	1.0804	5.9423						
F'	36	6.7568	1.0869	6.6309						
G'	37	6.3739	1.1179	6.2795						
H'	38	6.1536	1.0917	6.0659						
I'	39	6.4752	1.0813	6.3960						
J'	40	6.6287	1.0750	6.5857						
K'	41	6.0090	1.1221	5.9324						
L'	42	6.0870	1.0999	5.8111						
VR33 A'	43	5.6487	1.0942	5.4535						
B'	44	6.7026	1.0885	6.5715						
C'	45	5.3763	1.0903	5.1571						
D'	46	6.6028	1.1121	6.4991						

VR33 : 00554

w
11-15-12

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 11/13/12 (A)

ANALYST: CDE / KE

Instrumentation

Drying Ovens: 12

Muffle Furnace: N / A

Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

11/13/2012 18:46 date/time in oven KE

11/14/2012 11:42 date/time out KE

elapsed hrs = 16.9

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:

Final ash wt (g) = (min ash wt - tare wt)

*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*

if ash wt > dry wt, "Chk for Err"

*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	11/13/12 17:24 KE	11/13/12 13:37 CDE	11/14/12 12:18 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	9.9998										
	record weights to 4 places	Cal OK!	Cal OK!	Cal OK!										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank			1.1208	1.1209			0.00							
VR33 E1		6.0790	1.0662	5.9747			4.91	97.9%						
VR33 E1 dup		6.1737	1.0934	6.0514			4.96	97.6%						
							RPD =	0.33%				RPD =	NA	
VR33 E1 trp		6.2290	1.1139	6.0047			4.89	95.6%						
							RSD =	1.28%				RSD =	NA	
VR33 F1		6.7188	1.0814	6.6208			5.54	98.3%						
VR33 F1		7.5010	1.0925	7.4463			6.35	99.1%						
VR33 F1		7.3974	1.1085	7.3503			6.24	99.3%						
VR33 F1		6.2771	1.1161	6.1170			5.00	96.9%						
VR33 F1		6.1322	1.0830	6.0355			4.95	98.1%						
VR33 F1		6.1163	1.0991	5.9492			4.85	96.7%						
VR33 F1		6.9374	1.0883	6.8316			5.74	98.2%						
VR34 A1		6.1085	1.0797	5.9381			4.86	96.6%						
VR34 B1		6.0522	1.0936	5.8922			4.80	96.8%						
VR34 C1		6.7539	1.1119	6.5982			5.49	97.2%						
VR34 D1		6.5234	1.0999	6.3997			5.30	97.7%						
VR34 E1		6.0785	1.0853	5.8991			4.81	96.4%						
VR34 F1		6.1103	1.0933	5.9278			4.83	96.4%						
VR34 G1		7.2733	1.1063	7.1264			6.02	97.6%						
VR34 H1		7.0868	1.1079	6.9207			5.81	97.2%						
VR34 I 1		6.0793	1.1120	5.9554			4.84	97.5%						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

DATE: 11/13/12 (A)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

ANALYST: CDE / KE

Instrumentation

Drying Ovens: 12

Muffle Furnace: N / A

Analytical Balance: 1123230597

Batch drying time		
record times as mm/dd/yy hh:mm		
11/13/2012 18:46	date/time in oven	KE
11/14/2012 11:42	date/time out	KE
elapsed hrs =	16.9	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

Cal Weight ID	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02
Date & Time	11/13/12 17:24 KE	11/13/12 13:37 CDE	11/14/12 12:18 KE				
Cal Wt (g) 10.0000	10.0000	10.0000	9.9998				
record weights to 4 places	Cal OK!	Cal OK!	Cal OK!				

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
VR34 J 1		6.6686	1.1099	6.5335			5.42	97.6%						
VR34 K1		7.5526	1.1146	7.3842			6.27	97.4%						
VR34 L1		6.7858	1.1141	6.7624			5.65	99.6%						

VR33 : 00553

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(4) 11-13-12 (W)

A

Analyst: CWG / (W)	Date: 11-13-12	Oven ID: 12	Balance ID: 1123230597
Time in Oven: 18:46	Time Out of Oven: 11:42	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	11-13-12 17:29	11-13-12 13:37	11-14-12 12:18						
Cal Weight (10.0000):	10.0000 (4)	10.0000 CWG	9.9998 (V)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	0	1.1208	1.1209						
VR33 E'	2	6.0790	1.0662	5.9747						
E' dup	3	6.1737	1.0934	6.0514						
E' 3rd	4	6.2290	1.1139	6.0047						
F'	5	6.7188	1.0814	6.6208						
G'	6	7.5010	~~1.07~~ 1.0547	7.4463						
~~H'~~	7	7.3974	~~1.0923~~ 1.0971	7.3503						
I'	8	6.2771	~~1.1063~~ 1.1063	6.1170						
J'	9	6.1322	1.0830	6.0355						
K'	10	6.1163	1.0991	5.9492						
L'	11	6.9374	1.0983	6.8316						
VR34 ~~VR1 DUP~~ A'	12	6.1085	1.0797	5.9381						
B'	13	6.0522	1.0936	5.8922						
C'	14	6.7539	1.1119	6.5982						
D'	15	6.5234	1.0999	6.3997						
E'	16	6.0785	1.0853	5.9891						
F'	17	6.1103	1.0933	5.9278						
G'	18	7.2733	1.1063	7.1264						
H'	19	7.0868	1.1079	6.9207						
I'	20	6.0793	1.1120	5.9554						
J'	21	6.6686	1.1099	6.5335						
K'	22	7.5526	1.1146	7.3842						
L'	23	6.7858	1.1141	6.7624						

~~(4) 1.0814~~

Soil Conductivity - pH

Date: 11/15/2012

meter: Orion Model 115

Analyst: KE 10:10

Conductivity Calibration

Potassium Chloride standard *ARI ID =* **N / A**

pH Calibration *Temperature (°C)* **19.9**

pH Buffers 2, 4, 7, 10, 12

Conductivity =	**1413**	*µS/cm*
Cal Temp	**N / A**	
Input Value		*µS/cm*

Verification Buffer pH

Source **FISHER#** 7.00

Conductivity Verification Standard

Source: **N / A**

Record Certified Values

µS / cm = 1000

TDS (mg/l) =

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			20.9	6.97			*OK@ 99.6%*
VR33 A1	10	20	20.8	5.76			
VR33 A1 du	10	20	20.7	5.76			*pH RPD =0%*
VR33 B1	20	20	20.5	5.94			
VR33 C1	10	20	20.4	6.41			
CR33 D1	20	20	20.4	6.00			
VR33 E1	20	20	20.3	5.98			
VR33 F1	20	20	20.4	5.79			
VR33 G1	20	20	20.7	5.92			
VR33 H1	20	20	21.0	6.06			
VR33 I 1	20	20	20.9	6.59			
pH 7 Buffer			20.9	6.98			*OK@ 99.7%*
VR33 J 1	20	20	20.8	4.69			
VR33 K1	20	20	20.8	5.40			
VR33 L1	20	20	20.7	6.00			
VR34 A1	10	20	20.7	5.77			
VR34 B1	20	20	20.7	5.90			
VR34 C1	20	20	20.8	5.63			
VR34 D1	20	20	21.1	5.80			
VR34 E1	20	20	21.6	6.79			
VR34 F1	10	20	20.9	6.12			
VR34 H1	10	20	20.8	6.16			
pH 7 Buffer			21.0	6.97			*OK@ 99.6%*
VR34 G1	20	20	20.8	6.19			
VR34 G1 du	20	20	20.8	6.26			*pH RPD =1.12%*
VR34 I 1	20	20	20.8	5.91			
VR34 J 1	20	20	20.5	6.09			
pH 7 Buffer			20.3	6.99			*OK@ 99.9%*

① 11-15-12 (W) ② 208 11-15-12 (W)

Soil Conductivity - pH

meter: Orion Model 115

Date: 11-15-12
Analyst: (W) 10:10

Conductivity Calibration
Potassium Chloride standard ARI ID = N / A

Conductivity =	1413	µS/cm
Cal Temp	N / A	
Input Value		µS/cm

pH Calibration Temperature (°C) 19.9
pH Buffers 2, 4, 7, 10, 12

Verification Buffer pH
Source FISHER# 7.00

Conductivity Verification Standard
Source: N / A

Record Certified Values
µS / cm = 1000
TDS (mg/l) =

ARI Number	Soil Wt. (grams)	Extract vol (mL)	Temp (°C)	pH	Conductivity (mS/cm)	Conductivity (µS/cm)	Notes & Flags
pH 7 Buffer			20.9	~~6.97~~ ① 6.97			
VR33 A'	10	20 ②	~~20.0~~	5.76			
A	10	20	20.7	5.76			
B'	20	20	20.5	5.94			
C'	10	20	20.4	6.41			
D'	20	20	20.4	6.00			
E'		20	20.3	5.98			
F'		20	20.4	5.79			
G'		20	20.7	5.98			
H'		20	21.0	6.06			
I'		20	20.9	6.59			
pH 7 Buffer			20.9	6.98			
VR33 J'	20	20	20.8	4.69			
K'			20.8	5.40			
L'			20.7	6.00			
VR34 A'	10		20.7	3.77			
B'	20		20.7	5.90			
C'			20.8	5.63			
D'			21.1	5.80			
E'			21.6	6.79			
F'	10		20.9	6.12			
H'	10		20.8	6.16			
pH 7 Buffer			21.0	6.97			
VR34 G'	20	20	20.8	6.19			
mG'			20.8	6.26			
I'			20.8	5.91			
J'			20.5	6.09			
pH 7 Buffer			20.3	6.99			
pH 7 Buffer							
pH 7 Buffer							

11-15-12 (W)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration Page 1 of 2

Date:	11-15-12		Buffer	Source	Lot #	pH	Temp.
Time:	11:00		2.00	Ricca	1208264	2.00	19.8
Analyst:	LW		4.00	Fisher	116550	4.01	19.9
			7.00	Ricca	1206051	7.02	19.9
			10.00	Fisher	116396	10.06	19.9
			12.00	Ricca	1206157	12.01	19.8
			Verification	Fisher	120143		

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
LW	11:10	ICV	6.98	6.98			19.9
		VS70A4	7.81	7.81			21.6
		A4 dup	7.84	7.84			21.4
		B4	7.06	7.05			21.2
		VS74 A1	7.41	7.41		BOD	18.8
		CCV	7.02	7.02			20.8
(W)	11:46	CCV	6.97	6.96	Soil		20.9
		VR33 A'	5.76	5.76			20.8
		A'	5.76	5.76			20.7
		B'	5.94	5.94			20.5
		C'	6.40	6.41			20.4
		~~CCV~~ D'	6.00	6.00			20.4
		E'	5.96	5.98			20.3
		F'	5.79	5.79			20.4
		G'	5.91	5.92			20.7
		H'	6.06	6.06			21.0
		I'	6.58	6.59			20.9
		CCV	6.98	6.98			20.9
		VR33 J'	4.68	4.69			20.8
		K'	5.40	5.40			20.8
		L'	6.00	6.00			20.7
		VR34 A'	5.77	5.77			20.7
		~~CCV~~ B'	5.90	5.90			20.7

VR33 : 00557

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Page 2 of 2

Calibration

(2) 6.79

Date:	11-15-12		Buffer	Source	Lot #	pH	Temp.
Time:	11:00		2.00	Ricca			
Analyst:	NW		4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

cont...

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
(W)	1446	VR34 ~~ICV~~ C'	5.63	5.63			20.8
		D'	5.77	5.80			21.1
		F'	~~6.79~~ (2)	6.79			21.6
		F'	6.12	6.12			20.9
		✓H'	(1) 6.14	6.16			20.8
		CCV	(1) 6.97	6.97			21.0
		VR34 G'	6.19	6.19			20.8
		G'	6.25	6.26			20.8
		I'	5.91	5.91			20.8
		✓ J'	6.09	6.09			20.5
		CCV	6.99	6.99			20.3
		CCV					

11-15-12 (1)

~~CCV~~

W
11-27-12

TOC Solids Prep Log

DATE: 11/12/12 (C)
ANALYST: KE / CDE 18:53

acid purging to remove IC and drying at 70°C for TOC analysis
General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:
HCL ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

make no entry to shaded cells, they are calculated

Sample ID ARI #	Client	IC Test + / -	Gravimetric Data (grams) Tare Wt.	Wet wt.	70°C dry wt	% Solids	*Sample description & notes (homogeneity and exclusions)*
Blank			13.1153		13.1158	0.5 mg	
VR31 I 1		-	13.1737	17.4428	17.6319	104.43%	
VR31 I 1 dup		-	13.1345	17.3369	17.5177	104.30%	RPD = 0.12%
VR31 I 1 trip		-	13.0908	17.6135	17.7876	103.85%	RSD = 0.29%
VR31 J 1		-	13.1292	17.4501	17.6299	104.16%	
VR31 K1		-	13.1564	17.8954	18.0470	103.20%	
VR31 L1		-	13.0951	18.0053	18.1395	102.73%	
VR32 A1		-	13.0688	18.2735	18.3952	102.34%	
VR32 B1		-	13.1717	18.2517	18.3832	102.59%	
VR32 C1		-	13.0896	17.4152	17.5694	103.56%	
VR32 D1		-	13.0916	17.8237	17.9536	102.75%	
VR32 E1		-	13.2227	17.5283	17.6810	103.55%	
VR32 F1		-	13.0734	18.6614	18.7925	102.35%	
VR32 G1		-	13.1945	18.2978	18.4987	103.94%	
VR32 H1		-	13.1680	18.8098	18.9960	103.30%	
VR32 I 1		-	13.1722	17.6422	18.8193	126.33%	
VR32 J 1		-	13.1535	19.0673	19.3083	104.08%	
VR32 K1		-	13.1641	17.8261	17.9852	103.41%	
VR32 L1		-	13.0975	16.6020	16.6963	102.69%	
VR33 A1		-	13.1663	16.0146	16.1164	103.57%	
VR33 B1		-	13.1063	17.1928	17.3254	103.24%	
VR33 C1		-	13.1338	16.5006	16.5988	102.92%	
VR33 D1		-	13.1746	17.5812	17.7203	103.16%	

① 11-12-12 (W)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W) /(C) (MW*) (C) Date 11-12-12 18:53

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank		~~—~~ ①	13.1153	~~0~~	13.1158		
VR31 I'		—	13.1737	17.4428	17.6319		
I'dup		—	13.1345	17.3369	17.5177		
I'TP		—	13.0908	17.6135	17.7876		
J'		—	13.1292	17.4501	17.6299		
K'		—	13.1564	17.8954	18.0470		
L'		—	13.0981	18.0053	18.1395		
VR32 A'		—	13.0688	18.2735	18.3952		
B'		—	13.1717	18.2517	18.3832		
C'		—	13.0896	17.4152	17.5694		
D'		—	13.0916	17.8237	17.9536		
E'		—	13.2227	17.5283	17.6810		
F'		—	13.0734	18.6614	18.7925		
G'		—	13.1945	18.2978	18.4987		
H'		—	13.1680	18.8098	18.8960		
I'		—	13.1722	18.6422	~~18.8562~~	18.8193	x
J'		—	13.1535	19.0673	19.3083		
K'		—	13.1641	17.8261	17.9852		
L'		—	13.0975	16.6020	16.6963		
VR33 A'		—	13.1663	16.0146	16.1164		
B'		—	13.1063	17.1928	17.3254		
C'		—	13.1338	16.5006	16.5988		
D'		—	13.1746	17.5812	17.7203		

11-12-12 (C)

VR33 : 00560

W
11-26-12

TOC Solids Prep Log

DATE: 11/13/2012

ANALYST: KE / CDE 18:54

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1669		13.1672	0.3 mg	
VR33 E1		-	13.1141	17.5275	17.5673	100.90%	
VR33 E1 dup		-	13.1755	17.3236	17.4601	103.29%	RPD = 2.34%
VR33 E1 trip		-	13.2589	17.7206	17.8233	102.30%	RSD = 1.17%
VR33 F1		-	13.1720	18.7331	18.8062	101.31%	
VR33 G1		-	13.1494	18.8736	18.9526	101.38%	
VR33 H1		-	13.1004	18.8012	18.8913	101.58%	
VR33 I 1		-	13.1154	17.7638	17.8746	102.38%	
VR33 J 1		-	13.1489	17.3160	17.4210	102.52%	
VR33 K1		-	13.2015	17.1836	17.2444	101.53%	
VR33 L1		-	13.1359	18.0266	18.1040	101.58%	
VR34 A1		-	13.0889	17.7419	17.7996	101.24%	
VR34 B1		-	13.1873	18.5903	18.6392	100.91%	
VR34 C1		-	13.1060	17.5733	17.6240	101.13%	
VR34 D1		-	13.1937	18.6478	18.7829	102.48%	
VR34 E1		+	13.1400	17.8292	18.2530	109.04%	
VR34 F1		-	13.1969	17.4734	17.6889	105.04%	
VR34 G1		-	13.0927	18.0841	18.2734	103.79%	
VR34 H1		-	13.1114	18.3213	18.5649	104.68%	
VR34 I 1		-	13.1183	18.4557	18.5210	101.22%	
VR34 J 1		-	13.1596	18.0656	18.2506	103.77%	
VR34 K1		-	13.1244	18.7036	18.8375	102.40%	
VR34 L1		-	13.1174	18.8317	18.9092	101.36%	

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Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W)/COC 18:54 ① 11-13-12 (W) Date 11-13-12

Sample Identification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.1669	Ø ①	13.1672		
VR33 E1		–	13.1141	~~17.5960~~	17.5225	17.5673	Dry Sent
nPE1		–	13.1755	17.3236	17.4601		
PE1		–	13.2589	17.7206	17.8233		
F1		–	13.1720	18.7331	18.8062		
G1		–	13.1494	18.8236	~~18.9~~ 18.9526		
H1		–	13.1004	18.8012	~~17.8746~~	188913	
F1		–	13.1154	17.7638	~~17.4240~~	17.8746	
J1		–	13.1489	17.3160	~~17.2444~~	17.4240	
K1		–	① ~~13.0889~~	13.2015	17.1836	17.2444	
L1		–	~~13.1873~~	13.1359	18.0266	18.1040	
VR34 A1		–	~~13.1060~~	13.0889	17.7419	17.7996	
B1		–	~~13.1937~~	13.1873	18.5903	18.6392	
C1		–	~~13.1400~~	13.1060	17.5733	176240	
D1		–	~~13.1965~~	13.1937	18.6478	18.7829	
E1		HH –	~~13.0927~~	13.1400	17.8292	18.2530	
P1		–	~~13.1114~~	~~13.0927~~	13.1969	17.4734	17.6889
G1		–	~~13.1183~~	~~13.1114~~	13.0927	18.0841	18.2734
H1		–	~~13.1596~~	~~13.1183~~	13.1114	18.3213	18.5649
I1		–	~~13.1244~~	~~13.1596~~	13.1183	18.4557	18.5210
J1		–	~~13.1174~~	~~13.1244~~	13.1596	18.0656	18.2506
K1		–	~~13.1356~~	~~13.1174~~	13.1244	18.7036	18.8375
L1		–	~~13.2013~~	~~13.1356~~ ②	13.1174	18.8317	18.9092

11-13-12 (W)

② 13.1356

③ 11-16-12 cm

Analytical Resources, Incorporated
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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (W)/COC 18:54 ① 11-13-12 (W) Date 11-13-12 (W)

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.1669	Ø	13.1672		
VR33 E1		–	13.1141	~~17.5960~~	17.5275	17.5673	Dry Soil
nPE1		–	13.1755	17.3236	17.4601		
PE1		–	13.2589	17.7206	17.8233		
F1		–	13.1720	18.7331	18.8062		
G1		–	13.1494	18.8236	~~18.~~ 18.9526		
H1		–	13.1004	18.8012	~~17.8746~~	18.8913	
F1		–	13.1154	17.7638	~~17.4240~~	17.8746	
J1		–	13.1489	17.3160	~~17.2444~~	17.4240	
K1		– ①	~~13.0887~~	13.2015	17.1836	17.2444	
L1		–	~~13.1873~~	13.1359	18.0266	18.1040	
VR34 A1		–	~~13.1060~~	13.0889	17.7419	17.7996	
B1		–	~~13.1437~~	13.1873	18.5903	18.6392	
C1		–	~~13.1400~~	13.1060	17.5733	17.6240	
D1		–	~~13.1965~~	13.1937	18.6478	18.7829	
E1		~~H~~ –	~~13.0927~~	13.1400	17.8292		
P1		–	~~13.1114~~	~~13.0927~~	13.1969	17.4734	17.6889
G1		–	~~13.1183~~	~~13.1114~~	13.0927	18.0841	18.2734
H1		–	~~13.1596~~	~~13.1183~~	13.1114	18.3213	18.5649
I1		–	~~13.1244~~	~~13.1596~~	13.1183	18.4557	18.5210
J1		–	~~13.1174~~	~~13.1244~~	13.1596	18.0656	18.2506
K1		–	~~13.1356~~	~~13.1174~~	13.1244	18.7036	18.8375
L1		–	~~13.2013~~	~~13.1356~~ ②	13.1174	18.8317	18.9092

② 13.1356

③ 11-16-12 cm

TOC, Solids Data Analysis

DATE: 11/26/2012

Instrument: Apollo 1 — ANALYST: KE 7:38

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C* — Balance ID:

Calibration Data

Cal Curve ID:	11/13/2012			*Conc:*	5,000 *ppm*
Calibration Curve Standard:	00130-01			*Curve Date:*	11/13/12
CalFact:	1.339E+05	*intercept:*	163305	*r2 :*	0.99851
Curve Range (ppm)	200	*to*	2,500		
Curve Range (µgC):	8	*to*	100	*40 µL injections of designated standard*	

Verification Standard

Source: *ERA# 0409-12-01* — *Conc:* 5,000 *ppm*

dilution : 10 *mL to* 50 — 1,000 *ppm*

Standard Reference Material

Source: *NIST 8704* — *Conc:* 33,510 *ppm*

Source: *NIST 1941B* — *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
34.5	63.8	40.6	87.1	60.2		70.3	20.7%	*OK*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
ICV				1.00		40.0	961	961	*96.10%*
Blank				1.00		40.0	-10.48	-10	*Blank OK*
NIST 1941B				1.00		1.6	30599	30,599	*102.34%*
Silica Blanks 1				1.00		35.0	35.5	36	*Low Scale*
Silica Blanks 2				1.00		36.5	63.77	64	*Low Scale*
Silica Blanks 3				1.00		37.3	40.61	41	*Low Scale*
Silica Blanks 4				1.00		33.0	87.07	87	*Low Scale*
Silica Blanks 5				1.00		34.1	60.19	60	*Low Scale*
VR33 A1				1.00		0.8	83382	83,382	*Range OK!*
VR33 B1				1.00		0.9	38023	38,023	*Range OK!*
VR33 C1	11.0	108.5	89.86%	9.86		1.7	14786	145,220	*Range OK!*
VR33 D1				1.00		0.9	62645	62,645	*Range OK!*
CCV				1.00		40.0	1036	1,036	*103.60%*
Blank				1.00		40.0	-22.12	-22	*Blank OK*
VR33 E1	11.5	113.6	89.88%	9.88		1.3	7641	74,855	*Range OK!*
VR33 E1 dup	11.0	109.2	89.93%	9.93		1.2	8134	80,120	*RPD=6.8%*
VR33 E1 trp	11.7	116.4	89.95%	9.95		1.4	7791	76,881	*RSD=3.4%*
VR33 E1 ms	11.5	113.6	89.88%	9.88	20	1.4	44197	435,965	*Range OK!*
Spike =	*0.05*	*mg C to*	*0.1*	*mg samp=*	*352.795*	*ppm*		*102%*	

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
VR33 F1	16.1	160.0	89.94%	9.94		2.0	5892	57,925	*Range OK!*
VR33 G1				1.00		1.0	7158	7,158	*Low Scale*
VR33 H1				1.00		1.8	4481	4,481	*Range OK!*
VR33 I 1	11.0	109.2	89.93%	9.93		1.8	8376	82,523	*Range OK!*
VR33 J 1	11.2	111.3	89.94%	9.94		1.5	9257	91,363	*Range OK!*
VR33 K1	11.6	113.8	89.81%	9.81		1.9	11118	108,452	*Range OK!*
CCV				1.00		40.0	1025	1,025	*102.50%*
Blank				1.00		40.0	-22.56	-23	*Blank OK*
VR33 L1	15.2	148.2	89.74%	9.75		2.2	5718	55,135	*Range OK!*
VR34 A1	18.7	176.8	89.42%	9.45		1.7	12349	116,159	*Range OK!*
VR34 B1				1.00		1.0	46969	46,969	*Range OK!*
VR34 C1				1.00		1.0	49462	49,462	*Range OK!*
VR34 D1	12.5	122.2	89.77%	9.78		1.8	10044	97,573	*Range OK!*
VR34 E1				1.00		1.1	31712	31,712	*Range OK!*
VR34 F1				1.00		1.1	43060	43,060	*Range OK!*
VR34 G1				1.00		0.8	52059	52,059	*Range OK!*
VR34 H1				1.00		1.0	50651	50,651	*Range OK!*
VR34 I 1				1.00		0.9	64966	64,966	*Range OK!*
CCV				1.00		40.0	1019	1,019	*101.90%*
Blank				1.00		40.0	-23.78	-24	*Blank OK*
VR34 J 1				1.00		1.1	36845	36,845	*Range OK!*
VR34 K1				1.00		0.9	76844	76,844	*Range OK!*
VR34 L1	11.8	114.1	89.66%	9.67		2.1	4984	47,583	*Range OK!*
VT58 A1				1.00		2.1	1062	1,062	*Low Scale*
VT58 A1 dup				1.00		2.2	1040	1,040	*RPD=2.1%*
VT58 A1 trp				1.00		2.1	1360	1,360	*RSD=15.5%*
VT58 A1 ms				1.00	10	2.0	15771	15,771	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.0*	*mg samp=*	*12,500*	*ppm*		*118%*	
VT58 B1				1.00		3.2	375	375	*Low Scale*
VT58 C1				1.00		4.8	1162	1,162	*Low Scale*
VT58 D1				1.00		5.9	785	785	*Low Scale*
CCV				1.00		40.0	989	989	*98.90%*
Blank				1.00		40.0	-21.47	-21	*Blank OK*
VT56 E1				1.00		4.2	803	803	*Low Scale*
VT58 F1				1.00		6.9	716	716	*Low Scale*
VR35 A1	12.9	128.2	89.94%	9.94		2.6	4462	43,715	*Range OK!*
VR35 A1 dup	12.4	120.8	89.74%	9.74		2.6	3996	38,314	*RPD=13.2%*
VR35 A1 trp	12.4	122.8	89.90%	9.90		2.8	3942	38,412	*RSD=7.7%*
VR35 A1 ms	12.9	128.2	89.94%	9.94	10	2.8	12435	122,950	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.3*	*mg samp=*	*88,732*	*ppm*		*89%*	
VR35 B1				1.00		1.0	33883	33,883	*Range OK!*
VR35 C1				1.00		1.2	7877	7,877	*Range OK!*
VR35 D1				1.00		2.9	3469	3,469	*Range OK!*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
VR35 E1				1.00		0.9	24750	24,750	*Range OK!*
CCV				1.00		40.0	920	920	*92.00%*
Blank				1.00		40.0	-27.16	-27	*Blank OK*
VR35 F1	24.7	246.4	89.98%	9.98		1.6	10945	108,553	*Range OK!*
VR35 G1				1.00		1.0	75451	75,451	*Range OK!*
VR35 H1				1.00		0.8	91579	91,579	*Range OK!*
VR35 I 1				1.00		1.2	40037	40,037	*Range OK!*
VR35 J 1				1.00		1.0	58289	58,289	*Range OK!*
VR35 K1				1.00		1.1	27493	27,493	*Range OK!*
VR35 L1	13.2	128.7	89.74%	9.75		2.0	8316	80,465	*Range OK!*
NIST 1941B				1.00		1.9	29563	29,563	*98.87%*
CCV				1.00		40.0	1020	1,020	*102.00%*
Blank				1.00		40.0	-25.28	-25	*Blank OK*

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(1) 11-28-12 (initials)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 3

Set-Up Parameters MODE: NPOC		INLET: Boat Sampler		
Standards:	Source	Conc (ppm)	Analyst:	(initials)
Calibration:	ARI - 00128-03	5000	Date:	11-28-12
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS	Time:	7:38
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			1.6			
SB 1			35.0			
2			35.5			= 34.1
3			37.3	Silica Blk #5 11-26-12		
4			33.0			
VR33 A'			0.8			
B'			0.9			
C'	11.0	108.5	1.7			
D'			0.9			
CCV			40			
CCB			40			
VR33 E'	11.5	113.6	1.3			
DP E'	11.0	109.2	1.2			
TP E'	11.7	116.4	1.4			
MS E'	11.5	113.0	1.4	2500	20	
F'	16.1	160.0	2.0			
G'			1.0			
H'			1.8			
I'	11.0	109.2	1.8			
J'	11.2	111.3	1.5			
K'	11.6	113.8	1.9			
CCV			40			
CCB			40			
VR33 L'	15.2	148.2	2.2			
VR34 A'	18.7	176.8	1.7			
B'			[illegible] 1.0			
C'			1.0			
D'	12.6	122.2	1.8			
E'			1.1			
F'			1.1			

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(i) 11-26-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(W)
Calibration:	ARI - 0028-03	5000	Date:	11-26-12
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS	Time:	7:38
SRM:	NBS - (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg) Sample	+ Silica Gel	Burn Wt mg	Matrix Spike Data mg/L	µL added	Comments
VR34 G'			0.8			
H'			1.0			
I'			0.9			
~~J~~	CCV		40			
CCV ~~K~~ (i)	CCB		40			
VR34 ~~CCB~~ ~~K~~ (i) J'	~~K~~ J'		(i) ~~40~~ ~~1.2~~ (i) 1.1			
VR34 K'			0.9			
L'	11.8	114.1	2.1			
VT58 A'			2.1			
dpA'			2.2			
tpA'			(i) ~~2.2~~ 2.1			
MSA'			2.0	2500	10	
B'			3.2			
C'			4.8			
D'			5.9			
CCV			40			
CCB			40			
VT58 E'			4.2			
F'	~~20~~ (i)		6.9			
VR35 A'	12.9	128.2	2.6			
dpA'	12.4	120.8	2.6			
tpA'	12.4	122.8	2.8			
MSA'	12.9	128.2	2.8	2500	10	
B'			1.0			
C'			1.2			
D'			2.9			
E'	~~24.7~~ (i)	~~246.4~~ (i)	0.9			
CCV			40			
CCB			40			
VR35 F'	24.7	246.4	1.6			
G'			1.0			
H'			0.8			

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(M) 11-26-12 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler		
Standards:	Source	Conc (ppm)	Analyst: (V)		
Calibration:	ARI - 00128-03	5000	Date: 11-26-12		
Verification:	ERA - 0409-12-01	5000 to 1000 for CVS	Time: 1:38		
SRM:	NBS - (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B1464541 45	
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
UR35 I'			1.2			
J'			1.0			
K'			1.1			
L	13.2	128.7	2.0			
NBS1941 B			1.9			
CCV			40			
CCB			40			

11-26-12 (W)

11-26-12 (W)

Detailed Analysis Report Print Date/Time: 2012/11/26 17:26:20

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11260746
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 07:50
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	960.5615	38.4225	5307964	6.610	7.606	152

Last Message: Out of Calibration

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11260758
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:00
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-10.4847	-0.4194	107150	6.897	7.891	53

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11260804
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:09
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30598.6211	48.9578	6718615	6.713	7.710	208

Sample ID: Silica Blank 1 Mode: TOC
Method: Boat Sampler Filename: 11260818
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34.5058	1.2077	161708	6.718	7.713	58

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 11260829
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:31
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	63.7652	2.2637	303098	6.585	7.584	64

Sample ID: Silica Blank 3 Mode: TOC
Method: Boat Sampler Filename: 11260836
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:38
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	41.6128	1.5438	206715	6.528	7.525	61

Sample ID: Silica Blank 4 Mode: TOC
Method: Boat Sampler Filename: 11260844
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 08:46
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	87.0669	2.8732	384714	6.617	7.612	66

Sample ID: Silica Blank 5
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11260854
Timestamp: 2012/11/26 08:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	60.1851	2.0523	274799	6.743	7.742	64

Sample ID: VR33 A1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11260918
Timestamp: 2012/11/26 09:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	83382.0312	66.7056	8931693	6.826	7.825	172

Sample ID: VR33 B1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11260929
Timestamp: 2012/11/26 09:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	38022.6562	34.2204	4582013	6.937	7.934	144

Sample ID: VR33 C1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11260937
Timestamp: 2012/11/26 09:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14786.3125	25.1367	3365737	7.043	8.043	126

Sample ID: VR33 D1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11260955
Timestamp: 2012/11/26 09:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	62644.7266	56.3803	7549156	7.274	8.273	153

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261002
Timestamp: 2012/11/26 10:07
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1035.7686	41.4307	5710764	7.079	8.077	158

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261009
Timestamp: 2012/11/26 10:12
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-22.1213	-0.8849	44826	7.268	7.245	120

Last Message: Low Sample Detected

Sample ID: VR33 E1 | Mode: TOC
Method: Boat Sampler | Filename: 11261016
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 10:18
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7641.4258	9.9339	1330115	7.209	8.208	96

Sample ID: VR33 E1 E1 prp | Mode: TOC
Method: Boat Sampler | Filename: 11261020
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 10:22
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8133.7959	9.7606	1306911	7.357	8.353	96

Sample ID: VR33 E1 TRIP | Mode: TOC
Method: Boat Sampler | Filename: 11261025
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 10:36
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7790.5786	10.9068	1460391	7.239	8.238	104

Sample ID: VR33 E1 MS | Mode: TOC
Method: Boat Sampler | Filename: 11261044
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 10:48
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	44197.3633	61.8763	8285062	7.437	8.435	158

Sample ID: VR33 F1 | Mode: TOC
Method: Boat Sampler | Filename: 11261055
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 10:58
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5891.9614	11.7839	1577834	7.414	8.413	99

Sample ID: VR33 G1 | Mode: TOC
Method: Boat Sampler | Filename: 11261109
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 11:12
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7158.3057	7.1583	958477	7.397	8.395	102

Sample ID: VR33 H1 | Mode: TOC
Method: Boat Sampler | Filename: 11261118
Cal. Curve: 11132012 BOAT CAL | Timestamp: 2012/11/26 11:21
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4480.9922	8.0658	1079986	7.472	8.471	104

Sample ID: VR33 I 1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261124
Timestamp: 2012/11/26 11:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8375.8350	15.0765	2018701	7.467	8.465	107

Sample ID: VR33 J1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261130
Timestamp: 2012/11/26 11:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9256.8750	13.8853	1859204	7.506	8.502	107

Sample ID: VR33 K1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261137
Timestamp: 2012/11/26 11:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11118.3691	21.1249	2828564	7.498	8.493	117

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261143
Timestamp: 2012/11/26 11:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1025.3511	41.0140	5654969	7.422	8.422	143

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261149
Timestamp: 2012/11/26 11:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-22.5553	-0.9022	42502	7.443	7.367	120

Last Message: Low Sample Detected

Sample ID: VR33 L1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261156
Timestamp: 2012/11/26 11:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5717.8213	12.5792	1684320	7.404	8.402	105

Sample ID: VR3A A1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261202
Timestamp: 2012/11/26 12:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12349.1611	20.9936	2810980	7.308	8.307	117

Sample ID: VR3A B1 Mode: TOC
Method: Boat Sampler Filename: 11261209
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:12
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	46968.6367	46.9686	6288967	7.162	8.160	161

Sample ID: VR3A C1 Mode: TOC
Method: Boat Sampler Filename: 11261217
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:20
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	49462.2617	49.4623	6622856	7.155	8.154	155

Sample ID: VR3A D1 Mode: TOC
Method: Boat Sampler Filename: 11261224
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10044.2158	18.0796	2420806	7.204	8.204	111

Sample ID: VR3A E1 Mode: TOC
Method: Boat Sampler Filename: 11261230
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:34
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31712.4219	34.8837	4670823	7.130	8.129	156

Sample ID: VR3A F1 Mode: TOC
Method: Boat Sampler Filename: 11261236
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:40
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	43060.3828	47.3664	6342229	7.151	8.150	152

Sample ID: VR3A G1 Mode: TOC
Method: Boat Sampler Filename: 11261243
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:47
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	52058.9414	41.6472	5576435	7.061	8.060	153

Sample ID: VR3A H1 Mode: TOC
Method: Boat Sampler Filename: 11261249
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 12:56
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	50651.0547	50.6511	6782032	7.110	8.106	152

Sample ID: VR3A J1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261258
Timestamp: 2012/11/26 13:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	64966.3359	58.4697	7828927	7.152	8.151	172

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261310
Timestamp: 2012/11/26 13:14
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1019.4501	40.7780	5623364	6.919	7.917	148

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261318
Timestamp: 2012/11/26 13:21
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-23.7771	-0.9511	35958	6.936	6.860	120

Last Message: Low Sample Detected

Sample ID: VR34 J1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261325
Timestamp: 2012/11/26 13:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36844.9531	40.5294	5426778	6.946	7.946	155

Sample ID: VR34 K1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261332
Timestamp: 2012/11/26 13:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	76843.6016	69.1592	9260226	6.780	7.776	168

Sample ID: VR34 L1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261338
Timestamp: 2012/11/26 13:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4983.6714	10.4657	1401329	6.854	7.846	102

Sample ID: VT58 A1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261343
Timestamp: 2012/11/26 13:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1062.2076	2.2306	298676	6.753	7.746	60

Sample ID: VT58 A1 DP
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261352
Timestamp: 2012/11/26 13:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1040.1276	2.2883	306394	6.668	7.664	61

Sample ID: VT58 A1 MP
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261359
Timestamp: 2012/11/26 14:01
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1359.5405	2.8550	382281	6.606	7.604	67

Sample ID: VT58 A1 MS
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261403
Timestamp: 2012/11/26 14:06
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15771.2393	31.5425	4223448	6.793	7.791	128

Sample ID: VT58 B1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261439
Timestamp: 2012/11/26 14:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	375.1033	1.2003	160721	6.663	7.658	61

Sample ID: VT58 B1 DI
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261445
Timestamp: 2012/11/26 14:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1161.6237	5.5758	746583	6.625	7.624	75

Sample ID: VT58 D1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261450
Timestamp: 2012/11/26 14:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	784.6025	4.6292	619831	6.601	7.599	70

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261456
Timestamp: 2012/11/26 14:59
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	989.3541	39.5742	5462173	6.558	7.557	141

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261501
Timestamp: 2012/11/26 15:03
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-21.4663	-0.8587	48334	6.595	7.587	41

Sample ID: VT56 E1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261505
Timestamp: 2012/11/26 15:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	802.9234	3.3723	451538	6.521	7.516	62

Sample ID: VT56 F1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261509
Timestamp: 2012/11/26 15:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	715.7490	4.9387	661274	6.586	7.577	70

Sample ID: VR35 A1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261514
Timestamp: 2012/11/26 15:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4462.2505	11.6019	1553455	6.491	7.490	102

Sample ID: VR35 A1 DF
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261518
Timestamp: 2012/11/26 15:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3995.5652	10.3885	1390987	6.454	7.451	104

Sample ID: VR35 A1 TRIP
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261524
Timestamp: 2012/11/26 15:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3941.9822	11.0376	1477897	6.389	7.385	100

Sample ID: VR35 A1 ~~TRIP~~ WW
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261532
Timestamp: 2012/11/26 15:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12435.0283	34.8181	4662042	6.366	7.364	133

Sample ID: VR35 B1 Mode: TOC
Method: Boat Sampler Filename: 11261538
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 15:42
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	33882.9062	33.8829	4536825	6.279	7.279	148

Sample ID: VR35 C1 Mode: TOC
Method: Boat Sampler Filename: 11261546
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 15:48
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7877.3901	9.4529	1265712	6.275	7.268	117

Sample ID: VR35 D1 Mode: TOC
Method: Boat Sampler Filename: 11261551
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 15:54
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3469.3005	10.0610	1347135	6.374	7.372	131

Sample ID: VR35 E1 Mode: TOC
Method: Boat Sampler Filename: 11261557
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 16:00
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24750.2734	22.2752	2982592	6.453	7.451	148

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11261613
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 16:17
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	919.6147	36.7846	5088657	6.715	7.715	144

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11261620
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 16:22
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-27.1645	-1.0866	17816	6.581	6.661	120

Last Message: Low Sample Detected

Sample ID: VR35 F1 Mode: TOC
Method: Boat Sampler Filename: 11261626
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/26 16:29
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10944.6387	17.5114	2344730	6.674	7.671	114

Sample ID: VR35 G1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261634
Timestamp: 2012/11/26 16:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	75451.0000	75.4510	10102674	6.545	7.544	176

Sample ID: VR35 H1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261640
Timestamp: 2012/11/26 16:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	91578.8125	73.2630	9809714	6.707	7.705	166

Sample ID: VR35 I 1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261646
Timestamp: 2012/11/26 16:50
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	40036.6758	48.0440	6432956	6.647	7.645	152

Sample ID: VR35 J1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261654
Timestamp: 2012/11/26 16:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	58288.9883	58.2890	7804730	6.474	7.470	225

Sample ID: VR35 K1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261659
Timestamp: 2012/11/26 17:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27492.5254	30.2418	4049288	6.535	7.533	158

Sample ID: VR35 L1
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261704
Timestamp: 2012/11/26 17:08
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8315.7402	16.6315	2226908	6.493	7.488	113

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11261710
Timestamp: 2012/11/26 17:15
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29562.7461	56.1692	7684204	6.520	7.518	233

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11261716
Timestamp: 2012/11/26 17:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1019.6380	40.7855	5624370	6.558	7.556	152

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 11261721
Timestamp: 2012/11/26 17:24
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-25.2847	-1.0114	27884	6.671	6.607	120

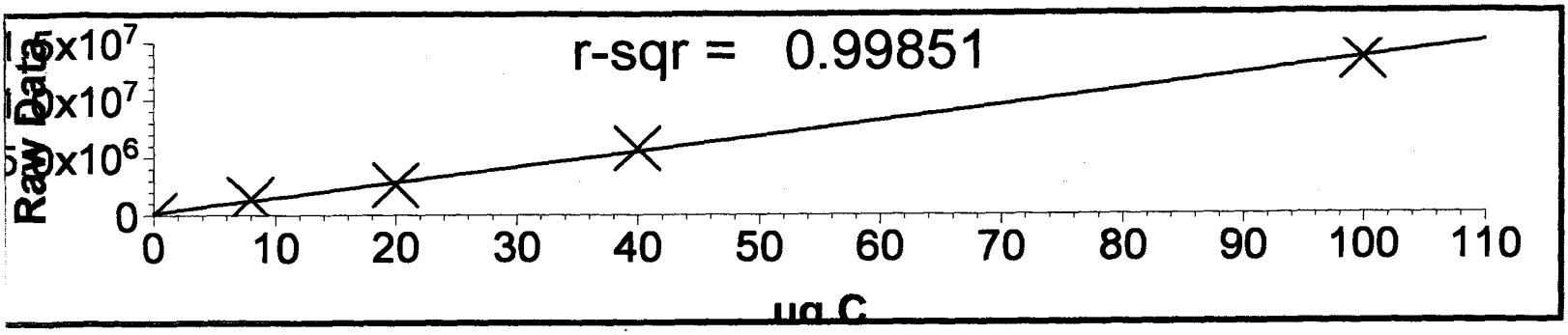
Last Message: Low Sample Detected

11-13-12

Calibration Report Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID: 11132012 BOAT CAL
Created: 2012/11/13 17:59
Calibration Factor (m): 1.339e+05
Y Intercept (b): 163305
r-squared: 0.99851

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46


r-sqr = 0.99851
Raw Data
x10^7
x10^7
x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Detailed Analysis Report Print Date/Time: 2012/11/13 18:00:30

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131156
Timestamp: 2012/11/13 12:29
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 34152 Std Dev: 13649 RSD: 39.96

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131238
Timestamp: 2012/11/13 13:05
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

<<<Statistics>>> Mean: 1702454 Std Dev: 978717 RSD: 57.49

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131440
Timestamp: 2012/11/13 15:23
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

<<<Statistics>>> Mean: 2675582 Std Dev: 260489 RSD: 9.74

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131526
Timestamp: 2012/11/13 15:37
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

<<<Statistics>>> Mean: 5317643 Std Dev: 38175 RSD: 0.72

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131539
Timestamp: 2012/11/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

<<<Statistics>>> Mean: 1402526 Std Dev: 274468 RSD: 19.57

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131603
Timestamp: 2012/11/13 16:30
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131635
Timestamp: 2012/11/13 16:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131653
Timestamp: 2012/11/13 17:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 11132012 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 11131715
Timestamp: 2012/11/13 17:46
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: VR33

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ANALYST NOTES - GeoTech

ARI Job No: VR33 Client Name: Hart Crowser, Inc.

Parameter: #10 Screen Client Project: Upper Columbia

☐ Job OK, no corrective action required

Set up Date 11/8/12

Air Dry Start: 15:30 11/8/12

#10 Sieve Start 11/12/12

Analyst: gc Date Completed: 11/12/12

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AV
Signature

November-28-2012
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

November 28, 2012

Steve Hughes
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Upper Columbia 17800-36
ARI Job No. VR34

Dear Steve:

Please find enclosed the chain of custody documentation and data package for samples from the project referenced above

Sample receipt and details of the analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211

Enclosures

cc: eFile VR34

KFB/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VR34

VR34 5 of 9

Sample Custody Record

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB ~~Z~~ 17800-36 LAB NUMBER

PROJECT NAME Upper Columbia

HART CROWSER CONTACT Steve Hughes

SAMPLED BY: PRS, SMF, WDM, KJH

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: Metals*	TOC	pH (EPA 9045)	Total Solids (SM 2540B)	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	SA4-6C		11/2/12	0910	SOIL	X	X	X	X	1	
	SA4-7C		11/1/12	1557						1	
	SA4-8C		11/1/12	1533						1	
	SA4-Field Duplicate		11/2/12	0930						1	
	SA5-3C		11/3/12	0840						1	
	SA5-4C		11/2/12	1457						1	
	SA5-7C		11/2/12	1337						1	
	SA5-Field Duplicate		11/2/12	1517						1	
	SA6-1C		11/2/12	1308						1	
	SA6-2C		11/2/12	1410						1	
	SA6-3C		11/2/12	1558						1	
	SA6-4C		11/3/12	0844						1	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE Suzanne Faubl	11/7/12	SIGNATURE [illegible] Atwell	11-7-12
PRINT NAME Suzanne Faubl	TIME	PRINT NAME	TIME
COMPANY Hart Crowser	0800	COMPANY ARI	1130
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

* METALS - Ag, Al, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Mg, Mn, Ni, Pb, K, Na, Sb, Se, Ti, V, Zn (METHOD 6010B/6020)
Hg BY EPA 7471A

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. _____ for Other Contract Requirements

12 TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE _____
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐48 HOURS ☒STANDARD
☐72 HOURS OTHER _____

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser

Project Name: Upper Columbia

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS (Courier) Hand Delivered Other: _____

Assigned ARI Job No: VR34

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 2.9 4.7 5.1 3.8 ~~1.2~~

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: CA Date: 11-07-12 Time: 1130

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		(YES)	NO
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

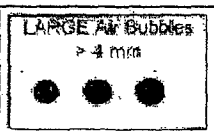
Samples Logged by: SM Date: 11/7/12 Time: 1329

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR34

ANALYTICAL
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INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR34
November 28, 2012

Sample Receipt:

Please find enclosed the original chain of custody (COC) record and analytical results for the project referenced above. Analytical Resources, Inc. accepted twelve soil samples in good condition on November 7, 2012. The samples were received with cooler temperatures between 2.9 and 5.1°C. Please see the Cooler Receipt Form for further details.

Total Metals by 200.8, 6010C and 7471A

The samples were digested on 11/15/12 and analyzed between 11/15/12 and 11/19/12 within the method recommended holding time.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): The percent differences (%Ds) for several elements were not within control limits for the CCAL that bracketed the 11/16/12 ICP analyses of these samples. This CCAL was immediately re-analyzed. The %Ds for all elements were within acceptable QC limits. No further corrective actions were taken. All other analytes of interest were within method acceptance criteria.

Samples: No anomalies were encountered for these samples.

Method Blank(s): The method blank was free of contamination.

LCS: Is in control.

Matrix spike/Sample Duplicate/RPD: The percent recoveries for aluminum, antimony, calcium, iron, lead and manganese were not within control limits for the matrix spike associated with sample SA4-6C. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that the sample matrix was the cause of the poor MS recoveries. No corrective actions were taken.

The RPD for silver was not within control limits for the matrix duplicate associated with sample SA4-6C. Since the percent recoveries for all elements were within acceptable QC limits for the corresponding LCS, it was concluded that a lack of sample homogeneity was the cause of the high RPD. No corrective actions were taken.

Conventional Chemistry Parameters

The samples were analyzed between 11/13/12 and 11/26/12 within the method recommended holding times.

Initial calibration (s): All analytes were within method acceptance criteria.

Continuing calibration (s): All analytes of interest were within method acceptance criteria.

Samples: There were no anomalies with these samples.

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative
Project: 17800-36
ARI Job No.: VR34
November 28, 2012

Method Blank(s): The method blanks were free of contamination.

SRM/ LCS/ Sample Replicates: All percent recoveries and RPDs were in control.

Matrix spike: Is in control.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Hart Crowser, Inc.	**ARI Job No.:** VR34
Client Project: Upper Columbia	**Client Project No.:** 17800-36

Case Narrative

1. Twelve samples were received on November 7, 2012, and were in good condition.
2. The samples were submitted for separation of the less than 2mm material.
3. The samples were each placed in a clean tare and air-dried.
4. The samples were separated into two size fractions using a decontaminated, stainless steel #10 (2mm) sieve and sieve pan.
5. After separation, both size fractions were delivered to sample receiving for distribution.
6. There were no further anomalies in the samples or test method.

Released by: Gemma Curtis Date: 11/15/12
Title: *Geotechnical Division Manager*

Reviewed by: Esther Doble Date: November 15, 2012
Title: *Lead Technician*

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR34
Client: Hart Crowser Inc.
Project Event: 17800-36
Project Name: Upper Columbia

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	SA4-6C	VR34A	12-22213	Soil	11/02/12 09:10	11/07/12 11:30
2.	SA4-7C	VR34B	12-22214	Soil	11/01/12 15:57	11/07/12 11:30
3.	SA4-8C	VR34C	12-22215	Soil	11/01/12 15:33	11/07/12 11:30
4.	SA4-Field Duplicate	VR34D	12-22216	Soil	11/02/12 09:30	11/07/12 11:30
5.	SA5-3C	VR34E	12-22217	Soil	11/03/12 08:40	11/07/12 11:30
6.	SA5-4C	VR34F	12-22218	Soil	11/02/12 14:57	11/07/12 11:30
7.	SA5-7C	VR34G	12-22219	Soil	11/02/12 13:37	11/07/12 11:30
8.	SA5-Field Duplicate	VR34H	12-22220	Soil	11/02/12 15:17	11/07/12 11:30
9.	SA6-1C	VR34I	12-22221	Soil	11/02/12 13:08	11/07/12 11:30
10.	SA6-2C	VR34J	12-22222	Soil	11/02/12 14:10	11/07/12 11:30
11.	SA6-3C	VR34K	12-22223	Soil	11/02/12 15:58	11/07/12 11:30
12.	SA6-4C	VR34L	12-22224	Soil	11/03/12 08:44	11/07/12 11:30

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(6) ARI does not analyze for Silicon in solids or tissue samples

Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A

Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[4]	Solids[3]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[5]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[5]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) ARI has no accreditation for these elements.

Quality Control Parameters for Mercury Analysis using CVAA

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VR34

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SA4-6C	VR34A	12-22213	
SA4-6CD	VR34ADUP	12-22213	
SA4-6CS	VR34ASPK	12-22213	
SA4-7C	VR34B	12-22214	
PBS	VR34MB1	12-22214	
LCSS	VR34MB1SPK	12-22214	
SA4-8C	VR34C	12-22215	
SA4-Field Duplicat	VR34D	12-22216	
SA5-3C	VR34E	12-22217	
SA5-4C	VR34F	12-22218	
SA5-7C	VR34G	12-22219	
SA5-Field Duplicat	VR34H	12-22220	
SA6-1C	VR34I	12-22221	
SA6-2C	VR34J	12-22222	
SA6-3C	VR34K	12-22223	
SA6-4C	VR34L	12-22224	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 11/28/12 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA4-6C
SAMPLE

Lab Sample ID: VR34A
LIMS ID: 12-22213
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 96.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.2	10	**12,900**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**16.1**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**207**	
3050B	11/15/12	200.8	11/19/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**9.2**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.9	10	**6,410**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**24.5**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**8.4**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**25.2**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**19,600**	
3050B	11/15/12	200.8	11/19/12	**7439-92-1**	**Lead**	0.24	0.5	**512**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.6	10	**4,830**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**1,040**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.139**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**21.3**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	45	130	**2,010**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0082	0.2	**0.4**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**140**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**23.0**	
3050B	11/15/12	200.8	11/19/12	**7440-66-6**	**Zinc**	1.7	20	**430**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-7C
SAMPLE

Lab Sample ID: VR34B
LIMS ID: 12-22214
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 96.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.7	10	**18,700**	
3050B	11/15/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**15.0**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**383**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**5.5**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**7,070**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**53.8**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**9.3**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**25.9**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**22,900**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.23	0.5	**299**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**7,900**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.098	0.2	**1,190**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.075**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**35.5**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**1,930**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**150**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**29.4**	
3050B	11/15/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**270**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-8C
SAMPLE

Lab Sample ID: VR34C
LIMS ID: 12-22215
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Percent Total Solids: 97.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.4	10	**13,800**	
3050B	11/15/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.088	0.2	**12.5**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**182**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.5**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**3.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.5	10	**4,840**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**13.5**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**6.0**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**17.6**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**15,400**	
3050B	11/15/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.048	0.1	**133**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**3,280**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.095	0.2	**612**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.051**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**14.5**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	41	120	**1,350**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	7440-22-4	Silver	0.0081	0.2	0.2	U
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.5	120	**160**	
3050B	11/15/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**18.4**	
3050B	11/15/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.34	4	**186**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA4-Field Duplicate
SAMPLE

Lab Sample ID: VR34D
LIMS ID: 12-22216
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.6	10	**14,700**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.2**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**17.8**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**202**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**7.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**5,690**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**30.5**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.9**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**23.7**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**22,000**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**386**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**5,660**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.097	0.2	**801**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.102**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**24.3**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**2,450**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**160**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**25.4**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**380**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA5-3C
SAMPLE

Lab Sample ID: VR34E
LIMS ID: 12-22217
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/03/12
Date Received: 11/07/12

Percent Total Solids: 96.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.8	10	**15,500**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.088	0.2	**17.0**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**293**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**8.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**15,300**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**22.2**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**7.6**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**30.9**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**18,400**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**301**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**4,680**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.099	0.2	**1,090**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.088**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**23.5**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**1,690**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**190**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**22.9**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**510**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA5-4C
SAMPLE

Lab Sample ID: VR34F
LIMS ID: 12-22218
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 96.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.9	10	**12,000**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.5**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.090	0.2	**8.7**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**227**	
3050B	11/15/12	200.8	11/19/12	**7440-41-7**	**Beryllium**	0.019	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**7.5**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**6,910**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**14.0**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**5.2**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**20.4**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**13,900**	
3050B	11/15/12	200.8	11/19/12	**7439-92-1**	**Lead**	0.24	0.5	**344**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**3,670**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.2	**539**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.079**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.051	0.5	**10.8**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**2,360**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0083	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**180**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.018	0.2	**20.5**	
3050B	11/15/12	200.8	11/19/12	**7440-66-6**	**Zinc**	1.7	20	**360**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA5-7C
SAMPLE

Lab Sample ID: VR34G
LIMS ID: 12-22219
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.7	10	**10,700**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**10.1**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**130**	
3050B	11/15/12	200.8	11/19/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**9.5**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**7,260**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**15.5**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**4.8**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**21.7**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**13,900**	
3050B	11/15/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.047	0.1	**389**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**3,690**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.098	0.2	**427**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.114**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**10.9**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**2,060**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0079	0.2	**0.4**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**270**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**21.3**	
3050B	11/15/12	200.8	11/20/12	**7440-66-6**	**Zinc**	1.7	20	**460**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: SA5-Field Duplicate
SAMPLE

Lab Sample ID: VR34H
LIMS ID: 12-22220
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 96.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.7	10	**11,800**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.012	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**10.4**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**199**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**6.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.6	10	**5,960**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.036	0.5	**19.3**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**5.6**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**19.7**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**14,100**	
3050B	11/15/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**250**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**3,640**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.098	0.2	**492**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.054**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**12.4**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**2,560**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.095	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0077	0.2	**0.2**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.6	120	**140**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0029	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**22.1**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.6	20	**300**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA6-1C
SAMPLE

Lab Sample ID: VR34I
LIMS ID: 12-22221
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**9,020**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.089	0.2	**15.5**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**352**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**8.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**5,920**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.039	0.5	**20.0**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.033	0.2	**8.3**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.037	0.5	**18.1**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**16,600**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**402**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**3,570**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**2,020**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.096**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.050	0.5	**16.6**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**1,490**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.10	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0082	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**160**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0031	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**22.2**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**460**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA6-2C
SAMPLE

Lab Sample ID: VR34J
LIMS ID: 12-22222
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 97.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.5	10	**16,400**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.3**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.086	0.2	**14.8**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.14	0.7	**319**	
3050B	11/15/12	200.8	11/16/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**8.9**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.5	10	**4,790**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**20.6**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**8.9**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**28.3**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.8	10	**21,000**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.23	0.5	**401**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.3	10	**4,010**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.096	0.2	**942**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.080**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.048	0.5	**22.2**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	42	120	**1,830**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.098	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0079	0.2	**0.3**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.5	120	**180**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**23.3**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**420**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA6-3C
SAMPLE

Lab Sample ID: VR34K
LIMS ID: 12-22223
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Percent Total Solids: 96.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	9.0	10	**16,200**	
3050B	11/15/12	200.8	11/15/12	**7440-36-0**	**Antimony**	0.013	0.2	**0.2**	
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.087	0.2	**25.6**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.8	**340**	
3050B	11/15/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.018	0.2	**0.6**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**10.6**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.8	10	**4,800**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.038	0.5	**40.3**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.032	0.2	**11.7**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.036	0.5	**33.9**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**25,300**	
3050B	11/15/12	200.8	11/16/12	**7439-92-1**	**Lead**	0.24	0.5	**523**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.5	10	**6,200**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.10	0.3	**1,280**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.093**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.049	0.5	**27.3**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	44	130	**2,280**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	**7440-22-4**	**Silver**	0.0080	0.2	**0.4**	
3050B	11/15/12	6010C	11/16/12	**7440-23-5**	**Sodium**	2.7	130	**140**	
3050B	11/15/12	200.8	11/15/12	**7440-28-0**	**Thallium**	0.0030	0.2	**0.4**	
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.017	0.2	**28.5**	
3050B	11/15/12	200.8	11/16/12	**7440-66-6**	**Zinc**	1.7	20	**470**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: SA6-4C
SAMPLE

Lab Sample ID: VR34L
LIMS ID: 12-22224
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/03/12
Date Received: 11/07/12

Percent Total Solids: 99.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	**7429-90-5**	**Aluminum**	8.8	10	**6,060**	
3050B	11/15/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	**7440-38-2**	**Arsenic**	0.084	0.2	**5.7**	
3050B	11/15/12	6010C	11/16/12	**7440-39-3**	**Barium**	0.15	0.7	**44.1**	
3050B	11/15/12	200.8	11/15/12	**7440-41-7**	**Beryllium**	0.017	0.2	**0.2**	
3050B	11/15/12	200.8	11/15/12	**7440-43-9**	**Cadmium**	0.012	0.1	**1.5**	
3050B	11/15/12	6010C	11/16/12	**7440-70-2**	**Calcium**	4.7	10	**1,590**	
3050B	11/15/12	200.8	11/15/12	**7440-47-3**	**Chromium**	0.037	0.5	**8.9**	
3050B	11/15/12	200.8	11/15/12	**7440-48-4**	**Cobalt**	0.031	0.2	**2.5**	
3050B	11/15/12	200.8	11/15/12	**7440-50-8**	**Copper**	0.035	0.5	**7.5**	
3050B	11/15/12	6010C	11/16/12	**7439-89-6**	**Iron**	1.9	10	**8,830**	
3050B	11/15/12	200.8	11/15/12	**7439-92-1**	**Lead**	0.045	0.1	**84.5**	
3050B	11/15/12	6010C	11/16/12	**7439-95-4**	**Magnesium**	3.4	10	**1,980**	
3050B	11/15/12	6010C	11/16/12	**7439-96-5**	**Manganese**	0.099	0.2	**162**	
CLP	11/15/12	7471A	11/17/12	**7439-97-6**	**Mercury**	0.0004	0.007	**0.026**	
3050B	11/15/12	200.8	11/15/12	**7440-02-0**	**Nickel**	0.047	0.5	**7.1**	
3050B	11/15/12	6010C	11/16/12	**7440-09-7**	**Potassium**	43	120	**600**	
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.096	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	7440-22-4	Silver	0.0077	0.2	0.2	U
3050B	11/15/12	6010C	11/16/12	7440-23-5	Sodium	2.6	120	120	U
3050B	11/15/12	200.8	11/15/12	7440-28-0	Thallium	0.0029	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	**7440-62-2**	**Vanadium**	0.016	0.2	**12.4**	
3050B	11/15/12	200.8	11/15/12	**7440-66-6**	**Zinc**	0.33	4	**87**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA4-6C
MATRIX SPIKE

Lab Sample ID: VR34A
LIMS ID: 12-22213
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Aluminum	6010C	12,900	13,500	206	291%	H
Antimony	200.8	0.3	1.3	25.8	3.9%	N
Arsenic	200.8	16.1	40.0	25.8	92.6%	
Barium	6010C	207	418	206	102%	
Beryllium	200.8	0.5	25.1	25.8	95.3%	
Cadmium	200.8	9.2	31.1	25.8	84.9%	
Calcium	6010C	6,410	7,710	1,030	126%	H
Chromium	200.8	24.5	46.6	25.8	85.7%	
Cobalt	200.8	8.4	31.9	25.8	91.1%	
Copper	200.8	25.2	49.6	25.8	94.6%	
Iron	6010C	19,600	19,400	206	-97.1%	H
Lead	200.8	512	553	25.8	159%	H
Magnesium	6010C	4,830	6,100	1,030	123%	H
Manganese	6010C	1,040	1,120	51.5	155%	H
Mercury	7471A	0.139	0.203	0.0707	90.5%	
Nickel	200.8	21.3	46.3	25.8	96.9%	
Potassium	6010C	2,010	3,130	1,030	109%	
Selenium	200.8	0.5 U	77.1	82.4	93.6%	
Silver	200.8	0.4	20.9	25.8	79.5%	
Sodium	6010C	140	1,100	1,030	93.2%	
Thallium	200.8	0.4	26.1	25.8	99.6%	
Vanadium	200.8	23.0	46.6	25.8	91.5%	
Zinc	200.8	430	530	82.4	121%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: SA4-6C
DUPLICATE

Lab Sample ID: VR34A
LIMS ID: 12-22213
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Aluminum	6010C	12,900	13,300	3.1%	+/- 20%	
Antimony	200.8	0.3	0.3	0.0%	+/- 0.2	L
Arsenic	200.8	16.1	16.2	0.6%	+/- 20%	
Barium	6010C	207	219	5.6%	+/- 20%	
Beryllium	200.8	0.5	0.5	0.0%	+/- 0.2	L
Cadmium	200.8	9.2	8.9	3.3%	+/- 20%	
Calcium	6010C	6,410	6,960	8.2%	+/- 20%	
Chromium	200.8	24.5	25.2	2.8%	+/- 20%	
Cobalt	200.8	8.4	8.6	2.4%	+/- 20%	
Copper	200.8	25.2	25.1	0.4%	+/- 20%	
Iron	6010C	19,600	20,000	2.0%	+/- 20%	
Lead	200.8	512	519	1.4%	+/- 20%	
Magnesium	6010C	4,830	5,020	3.9%	+/- 20%	
Manganese	6010C	1,040	1,110	6.5%	+/- 20%	
Mercury	7471A	0.139	0.133	4.4%	+/- 20%	
Nickel	200.8	21.3	23.3	9.0%	+/- 20%	
Potassium	6010C	2,010	2,120	5.3%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Silver	200.8	0.4	0.3	28.6%	+/- 0.2	L
Sodium	6010C	140	140	0.0%	+/- 130	L
Thallium	200.8	0.4	0.4	0.0%	+/- 0.2	L
Vanadium	200.8	23.0	22.4	2.6%	+/- 20%	
Zinc	200.8	430	430	0.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: VR34LCS
LIMS ID: 12-22214
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Aluminum	6010C	203	200	102%	
Antimony	200.8	25.2	25.0	101%	
Arsenic	200.8	25.3	25.0	101%	
Barium	6010C	204	200	102%	
Beryllium	200.8	26.7	25.0	107%	
Cadmium	200.8	25.5	25.0	102%	
Calcium	6010C	994	1000	99.4%	
Chromium	200.8	26.2	25.0	105%	
Cobalt	200.8	26.4	25.0	106%	
Copper	200.8	25.9	25.0	104%	
Iron	6010C	208	200	104%	
Lead	200.8	27.2	25.0	109%	
Magnesium	6010C	1020	1000	102%	
Manganese	6010C	51.5	50.0	103%	
Mercury	7471A	0.123	0.143	86.0%	
Nickel	200.8	25.6	25.0	102%	
Potassium	6010C	1000	1000	100%	
Selenium	200.8	82.2	80.0	103%	
Silver	200.8	24.8	25.0	99.2%	
Sodium	6010C	970	1000	97.0%	
Thallium	200.8	27.7	25.0	111%	
Vanadium	200.8	25.7	25.0	103%	
Zinc	200.8	83	80	104%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Sample ID: METHOD BLANK

Lab Sample ID: VR34MB
LIMS ID: 12-22214
Matrix: Soil
Data Release Authorized:
Reported: 11/28/12

QC Report No: VR34-Hart Crowser Inc.
Project: Upper Columbia
17800-36
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/15/12	6010C	11/16/12	7429-90-5	Aluminum	3.6	5	5	U
3050B	11/15/12	200.8	11/15/12	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	11/15/12	6010C	11/16/12	7440-39-3	Barium	0.060	0.3	0.3	U
3050B	11/15/12	200.8	11/16/12	7440-41-7	Beryllium	0.018	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	11/15/12	6010C	11/16/12	7440-70-2	Calcium	1.9	5	5	U
3050B	11/15/12	200.8	11/15/12	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	11/15/12	200.8	11/15/12	7440-48-4	Cobalt	0.032	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	7440-50-8	Copper	0.036	0.5	0.5	U
3050B	11/15/12	6010C	11/16/12	7439-89-6	Iron	0.75	5	5	U
3050B	11/15/12	200.8	11/15/12	7439-92-1	Lead	0.047	0.1	0.1	U
3050B	11/15/12	6010C	11/16/12	7439-95-4	Magnesium	1.4	5	5	U
3050B	11/15/12	6010C	11/16/12	7439-96-5	Manganese	0.040	0.1	0.1	U
CLP	11/15/12	7471A	11/17/12	7439-97-6	Mercury	0.0004	0.007	0.007	U
3050B	11/15/12	200.8	11/15/12	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	11/15/12	6010C	11/16/12	7440-09-7	Potassium	17	50	50	U
3050B	11/15/12	200.8	11/15/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/15/12	200.8	11/19/12	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	11/15/12	6010C	11/16/12	7440-23-5	Sodium	1.1	50	50	U
3050B	11/15/12	200.8	11/15/12	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	7440-62-2	Vanadium	0.017	0.2	0.2	U
3050B	11/15/12	200.8	11/15/12	7440-66-6	Zinc	0.34	4	4	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Aluminum	AL	ICP	IP111671	2000.0	1993.69	**99.7**	2000.0	2097.56	**104.9**	2041.11	**102.1**	2092.74	**104.6**	2083.91	**104.2**	2185.74	**109.3**
Antimony	SB	PMS	MS111511	50.0	49.58	**99.2**	50.0	50.25	**100.5**	50.82	**101.6**	50.96	**101.9**	50.90	**101.8**	49.85	**99.7**
Arsenic	AS	PMS	MS111511	50.0	49.14	**98.3**	50.0	49.58	**99.2**	48.12	**96.2**	49.70	**99.4**	48.61	**97.2**	48.76	**97.5**
Barium	BA	ICP	IP111671	1000.0	1018.64	**101.9**	1000.0	1041.05	**104.1**	1040.26	**104.0**	1080.46	**108.0**	1068.00	**106.8**	1118.68	**111.9**
Beryllium	BE	PMS	MS111511	50.0	52.03	**104.1**	50.0	51.64	**103.3**	52.18	**104.4**	50.94	**101.9**	54.65	**109.3**	54.51	**109.0**
Cadmium	CD	PMS	MS111511	50.0	49.59	**99.2**	50.0	50.91	**101.8**	51.07	**102.1**	50.40	**100.8**	51.00	**102.0**	50.23	**100.5**
Calcium	CA	ICP	IP111671	2000.0	1908.96	**95.4**	2000.0	1978.86	**98.9**	1948.46	**97.4**	2125.08	**106.3**	2028.08	**101.4**	2094.76	**104.7**
Chromium	CR	PMS	MS111511	50.0	49.15	**98.3**	50.0	50.26	**100.5**	49.93	**99.9**	50.58	**101.2**	50.52	**101.0**	49.49	**99.0**
Cobalt	CO	PMS	MS111511	50.0	50.76	**101.5**	50.0	51.79	**103.6**	50.52	**101.0**	51.00	**102.0**	51.84	**103.7**	50.64	**101.3**
Copper	CU	PMS	MS111511	50.0	49.41	**98.8**	50.0	51.23	**102.5**	49.01	**98.0**	50.66	**101.3**	49.43	**98.9**	48.84	**97.7**
Iron	FE	ICP	IP111671	2000.0	2000.63	**100.0**	2000.0	2124.56	**106.2**	2043.91	**102.2**	2138.97	**106.9**	2128.52	**106.4**	2212.97	**110.6**
Lead	PB	PMS	MS111511	50.0	51.24	**102.5**	50.0	51.29	**102.6**	50.89	**101.8**	51.46	**102.9**	51.50	**103.0**	50.98	**102.0**
Magnesium	MG	ICP	IP111671	2000.0	1991.52	**99.6**	2000.0	2083.31	**104.2**	2041.91	**102.1**	2105.19	**105.3**	2112.69	**105.6**	2201.40	**110.1**
Manganese	MN	ICP	IP111671	1000.0	983.41	**98.3**	1000.0	987.07	**98.7**	986.80	**98.7**	1060.71	**106.1**	1007.27	**100.7**	1063.89	**106.4**
Mercury	HG	CVA	HG111701	8.0	7.26	**90.8**	4.0	3.69	**92.3**	3.65	**91.3**	1.76	**44.0**	3.63	**90.8**	3.59	**89.8**
Nickel	NI	PMS	MS111511	50.0	49.09	**98.2**	50.0	50.47	**100.9**	48.27	**96.5**	49.43	**98.9**	48.80	**97.6**	48.90	**97.8**
Potassium	K	ICP	IP111671	20000.0	19701.02	**98.5**	20000.0	19744.17	**98.7**	19949.30	**99.7**	20493.51	**102.5**	20090.12	**100.5**	21426.69	**107.1**
Selenium	SE	PMS	MS111511	80.0	76.84	**96.1**	50.0	49.83	**99.7**	48.32	**96.6**	50.16	**100.3**	49.16	**98.3**	49.29	**98.6**
Sodium	NA	ICP	IP111671	50000.0	48621.30	**97.2**	50000.0	48657.79	**97.3**	49021.38	**98.0**	52938.44	**105.9**	49020.90	**98.0**	55265.39	**110.5**
Thallium	TL	PMS	MS111511	50.0	52.26	**104.5**	50.0	51.73	**103.5**	51.44	**102.9**	52.64	**105.3**	52.48	**105.0**	51.65	**103.3**
Vanadium	V	PMS	MS111511	50.0	50.37	**100.7**	50.0	49.83	**99.7**	48.87	**97.7**	49.80	**99.6**	50.19	**100.4**	49.71	**99.4**
Zinc	ZN	PMS	MS111511	50.0	49.08	**98.2**	50.0	49.71	**99.4**	49.06	**98.1**	50.87	**101.7**	49.72	**99.4**	47.97	**95.9**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Aluminum	AL	ICP	IP111671	2000.0	1980.55	**99.0**	2035.55	**101.8**	2002.34	**100.1**	1987.45	**99.4**	2244.71	**112.2**	2102.98	**105.1**
Antimony	SB	PMS	MS111511	50.0	50.55	**101.1**	50.81	**101.6**	50.31	**100.6**	50.32	**100.6**	49.65	**99.3**	50.37	**100.7**
Arsenic	AS	PMS	MS111511	50.0	48.54	**97.1**	49.34	**98.7**	49.93	**99.9**	48.70	**97.4**	49.21	**98.4**	49.47	**98.9**
Barium	BA	ICP	IP111671	1000.0	1018.16	**101.8**	1037.75	**103.8**	1022.89	**102.3**	1020.34	**102.0**	1130.51	**113.1**	1057.49	**105.7**
Beryllium	BE	PMS	MS111511	50.0	55.41	**110.8**	55.33	**110.7**	55.02	**110.0**	54.75	**109.5**	54.71	**109.4**	55.58	**111.2**
Cadmium	CD	PMS	MS111511	50.0	50.81	**101.6**	50.92	**101.8**	50.81	**101.6**	49.82	**99.6**	50.05	**100.1**	50.69	**101.4**
Calcium	CA	ICP	IP111671	2000.0	1907.62	**95.4**	1959.62	**98.0**	1936.46	**96.8**	2048.24	**102.4**	2154.74	**107.7**	2131.88	**106.6**
Chromium	CR	PMS	MS111511	50.0	49.57	**99.1**	50.24	**100.5**	49.57	**99.1**	48.95	**97.9**	50.41	**100.8**	50.65	**101.3**
Cobalt	CO	PMS	MS111511	50.0	50.73	**101.5**	51.17	**102.3**	50.32	**100.6**	48.84	**97.7**	50.36	**100.7**	51.26	**102.5**
Copper	CU	PMS	MS111511	50.0	48.37	**96.7**	48.86	**97.7**	49.61	**99.2**	48.98	**98.0**	49.84	**99.7**	48.72	**97.4**
Iron	FE	ICP	IP111671	2000.0	2009.14	**100.5**	2071.54	**103.6**	2046.63	**102.3**	2061.01	**103.1**	2315.18	**115.8**	2158.58	**107.9**
Lead	PB	PMS	MS111511	50.0	51.44	**102.9**	51.22	**102.4**	50.71	**101.4**	50.18	**100.4**	50.15	**100.3**	50.65	**101.3**
Magnesium	MG	ICP	IP111671	2000.0	1999.38	**100.0**	2041.66	**102.1**	2017.65	**100.9**	2026.59	**101.3**	2260.38	**113.0**	2096.46	**104.8**
Manganese	MN	ICP	IP111671	1000.0	973.42	**97.3**	999.24	**99.9**	992.47	**99.2**	1036.56	**103.7**	1111.99	**111.2**	1087.14	**108.7**
Mercury	HG	CVA	HG111701	4.0	3.60	**90.0**	3.64	**91.0**	3.61	**90.3**	3.56	**89.0**	3.71	**92.8**	3.72	**93.0**
Nickel	NI	PMS	MS111511	50.0	48.10	**96.2**	49.26	**98.5**	48.91	**97.8**	47.68	**95.4**	48.59	**97.2**	48.19	**96.4**
Potassium	K	ICP	IP111671	20000.0	19593.93	**98.0**	19999.47	**100.0**	19787.78	**98.9**	20078.23	**100.4**	22083.81	**110.4**	21179.23	**105.9**
Selenium	SE	PMS	MS111511	50.0	49.24	**98.5**	49.76	**99.5**	50.69	**101.4**	49.16	**98.3**	49.78	**99.6**	50.22	**100.4**
Sodium	NA	ICP	IP111671	50000.0	48047.26	**96.1**	49204.60	**98.4**	48688.87	**97.4**	49285.03	**98.6**	57240.94	**114.5**	53444.28	**106.9**
Thallium	TL	PMS	MS111511	50.0	52.17	**104.3**	52.64	**105.3**	51.59	**103.2**	51.08	**102.2**	51.26	**102.5**	51.46	**102.9**
Vanadium	V	PMS	MS111511	50.0	50.17	**100.3**	50.76	**101.5**	49.17	**98.3**	49.12	**98.2**	50.82	**101.6**	49.82	**99.6**
Zinc	ZN	PMS	MS111511	50.0	48.94	**97.9**	50.16	**100.3**	50.38	**100.8**	48.98	**98.0**	49.80	**99.6**	49.30	**98.6**

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Aluminum	AL	ICP	IP111671	2000.0	2025.62	**101.3**	2020.30	**101.0**								
Antimony	SB	PMS	MS111511	50.0	49.99	**100.0**	50.01	**100.0**								
Arsenic	AS	PMS	MS111511	50.0	48.27	**96.5**	48.77	**97.5**								
Barium	BA	ICP	IP111671	1000.0	1017.02	**101.7**	1004.89	**100.5**								
Beryllium	BE	PMS	MS111511	50.0	55.00	**110.0**	54.13	**108.3**								
Cadmium	CD	PMS	MS111511	50.0	50.63	**101.3**	50.31	**100.6**								
Calcium	CA	ICP	IP111671	2000.0	1944.48	**97.2**	2049.88	**102.5**								
Chromium	CR	PMS	MS111511	50.0	49.70	**99.4**	50.73	**101.5**								
Cobalt	CO	PMS	MS111511	50.0	49.84	**99.7**	52.57	**105.1**								
Copper	CU	PMS	MS111511	50.0	48.44	**96.9**	49.24	**98.5**								
Iron	FE	ICP	IP111671	2000.0	2089.18	**104.5**	2110.67	**105.5**								
Lead	PB	PMS	MS111511	50.0	50.45	**100.9**	50.26	**100.5**								
Magnesium	MG	ICP	IP111671	2000.0	2024.98	**101.2**	2015.84	**100.8**								
Manganese	MN	ICP	IP111671	1000.0	1005.91	**100.6**	1028.80	**102.9**								
Mercury	HG	CVA	HG111701	4.0	3.66	**91.5**	3.61	**90.3**	3.55	**88.8**	3.45	**86.3**	3.54	**88.5**	3.46	**86.5**
Nickel	NI	PMS	MS111511	50.0	47.72	**95.4**	48.72	**97.4**								
Potassium	K	ICP	IP111671	20000.0	19956.13	**99.8**	19711.86	**98.6**								
Selenium	SE	PMS	MS111511	50.0	48.85	**97.7**	49.17	**98.3**								
Sodium	NA	ICP	IP111671	50000.0	48978.47	**98.0**	48093.20	**96.2**								
Thallium	TL	PMS	MS111511	50.0	51.26	**102.5**	51.25	**102.5**								
Vanadium	V	PMS	MS111511	50.0	51.28	**102.6**	51.34	**102.7**								
Zinc	ZN	PMS	MS111511	50.0	47.96	**95.9**	49.58	**99.2**								

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV18	%R	CCV19	%R	CCV20	%R	CCV21	%R	CCV22	%R	CCV23	%R
Aluminum	AL	ICP	IP111671	2000.0												
Antimony	SB	PMS	MS111511	50.0												
Arsenic	AS	PMS	MS111511	50.0												
Barium	BA	ICP	IP111671	1000.0												
Beryllium	BE	PMS	MS111511	50.0												
Cadmium	CD	PMS	MS111511	50.0												
Calcium	CA	ICP	IP111671	2000.0												
Chromium	CR	PMS	MS111511	50.0												
Cobalt	CO	PMS	MS111511	50.0												
Copper	CU	PMS	MS111511	50.0												
Iron	FE	ICP	IP111671	2000.0												
Lead	PB	PMS	MS111511	50.0												
Magnesium	MG	ICP	IP111671	2000.0												
Manganese	MN	ICP	IP111671	1000.0												
Mercury	HG	CVA	HG111701	4.0	3.65	**91.3**	3.69	**92.3**	3.61	**90.3**	3.61	**90.3**	3.69	**92.3**	3.62	**90.5**
Nickel	NI	PMS	MS111511	50.0												
Potassium	K	ICP	IP111671	20000.0												
Selenium	SE	PMS	MS111511	50.0												
Sodium	NA	ICP	IP111671	50000.0												
Thallium	TL	PMS	MS111511	50.0												
Vanadium	V	PMS	MS111511	50.0												
Zinc	ZN	PMS	MS111511	50.0												

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Beryllium	BE	PMS	MS111611	50.0	49.89	**99.8**	50.0	50.03	**100.1**	50.41	**100.8**	50.48	**101.0**	52.74	**105.5**	51.80	**103.6**
Lead	PB	PMS	MS111611	50.0	50.17	**100.3**	50.0	49.41	**98.8**	49.78	**99.6**	49.17	**98.3**	49.98	**100.0**	49.71	**99.4**
Zinc	ZN	PMS	MS111611	50.0	50.78	**101.6**	50.0	50.45	**100.9**	50.27	**100.5**	49.95	**99.9**	49.45	**98.9**	50.88	**101.8**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Beryllium	BE	PMS	MS111611	50.0	53.27	**106.5**	52.92	**105.8**	52.90	**105.8**						
Lead	PB	PMS	MS111611	50.0	48.66	**97.3**	49.77	**99.5**	49.03	**98.1**						
Zinc	ZN	PMS	MS111611	50.0	50.42	**100.8**	50.00	**100.0**	50.44	**100.9**						

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR34

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Beryllium	BE	PMS	MS111911	50.0	51.12	**102.2**	50.0	49.29	**98.6**	48.71	**97.4**	49.18	**98.4**	50.15	**100.3**	50.54	**101.1**
Lead	PB	PMS	MS111911	50.0	51.58	**103.2**	50.0	49.92	**99.8**	49.22	**98.4**	49.54	**99.1**	50.18	**100.4**	49.75	**99.5**
Silver	AG	PMS	MS111911	50.0	51.46	**102.9**	50.0	48.46	**96.9**	47.74	**95.5**	48.96	**97.9**	49.20	**98.4**	49.31	**98.6**
Zinc	ZN	PMS	MS111911	50.0	51.46	**102.9**	50.0	50.59	**101.2**	50.23	**100.5**	49.58	**99.2**	50.09	**100.2**	49.92	**99.8**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Beryllium	BE	PMS	MS111911	50.0	51.24	**102.5**	50.19	**100.4**	50.21	**100.4**						
Lead	PB	PMS	MS111911	50.0	50.20	**100.4**	50.48	**101.0**	49.03	**98.1**						
Silver	AG	PMS	MS111911	50.0	48.92	**97.8**	47.97	**95.9**	47.38	**94.8**						
Zinc	ZN	PMS	MS111911	50.0	49.81	**99.6**	49.83	**99.7**	49.82	**99.6**						

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS: ug/L

SDG: VR34

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Zinc	ZN	PMS	MS112011	50.0	50.67	**101.3**	50.0	51.76	**103.5**	50.94	**101.9**	49.61	**99.2**	50.41	**100.8**	49.23	**98.5**

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Aluminum	AL	ICP	IP111671	50.0	60.56	**121.1**	59.46	**118.9**	60.85	**121.7**						
Antimony	SB	PMS	MS111511	0.2	0.21	**105.0**										
Arsenic	AS	PMS	MS111511	0.2	0.19	**95.0**										
Barium	BA	ICP	IP111671	3.0	2.28	**76.0**	2.93	**97.7**	2.29	**76.3**						
Beryllium	BE	PMS	MS111511	0.2	0.22	**110.0**										
Cadmium	CD	PMS	MS111511	0.1	0.12	**120.0**										
Calcium	CA	ICP	IP111671	50.0	47.91	**95.8**	50.54	**101.1**	51.28	**102.6**						
Chromium	CR	PMS	MS111511	0.5	0.61	**122.0**										
Cobalt	CO	PMS	MS111511	0.2	0.21	**105.0**										
Copper	CU	PMS	MS111511	0.5	0.54	**108.0**										
Iron	FE	ICP	IP111671	50.0	53.99	**108.0**	57.63	**115.3**	62.83	**125.7**						
Lead	PB	PMS	MS111511	0.1	0.12	**120.0**										
Magnesium	MG	ICP	IP111671	50.0	54.79	**109.6**	58.12	**116.2**	51.93	**103.9**						
Manganese	MN	ICP	IP111671	1.0	0.86	**86.0**	1.06	**106.0**	0.92	**92.0**						
Mercury	HG	CVA	HG111701	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS111511	0.5	0.52	**104.0**										
Potassium	K	ICP	IP111671	500.0	501.15	**100.2**	506.23	**101.2**	498.77	**99.8**						
Selenium	SE	PMS	MS111511	0.5	0.58	**116.0**										
Sodium	NA	ICP	IP111671	500.0	471.16	**94.2**	475.77	**95.2**	466.00	**93.2**						
Thallium	TL	PMS	MS111511	0.2	0.22	**110.0**										
Vanadium	V	PMS	MS111511	0.2	0.23	**115.0**										
Zinc	ZN	PMS	MS111511	4.0	4.42	**110.5**										
Beryllium	BE	PMS	MS111611	0.2	0.20	**100.0**										
Lead	PB	PMS	MS111611	0.1	0.11	**110.0**										
Zinc	ZN	PMS	MS111611	4.0	4.32	**108.0**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Beryllium	BE	PMS	MS111911	0.2	0.20	**100.0**										
Lead	PB	PMS	MS111911	0.1	0.11	**110.0**										
Silver	AG	PMS	MS111911	0.2	0.21	**105.0**										
Zinc	ZN	PMS	MS111911	4.0	4.12	**103.0**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Zinc	ZN	PMS	MS112011		4.0	4.55	**113.8**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Aluminum	AL	ICP	IP111671	200.0	50.0	50.0	U	50.0	U								
Antimony	SB	PMS	MS111511	60.0	0.2	0.2	U	0.2	U								
Arsenic	AS	PMS	MS111511	10.0	0.2	0.2	U	0.2	U								
Barium	BA	ICP	IP111671	200.0	3.0	3.0	U	3.0	U								
Beryllium	BE	PMS	MS111511	5.0	0.2	0.2	U	0.2	U								
Cadmium	CD	PMS	MS111511	5.0	0.1	0.1	U	0.1	U								
Calcium	CA	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U								
Chromium	CR	PMS	MS111511	10.0	0.5	0.5	U	0.5	U								
Cobalt	CO	PMS	MS111511	50.0	0.2	0.2	U	0.2	U								
Copper	CU	PMS	MS111511	25.0	0.5	0.5	U	0.5	U								
Iron	FE	ICP	IP111671	100.0	50.0	50.0	U	50.0	U								
Lead	PB	PMS	MS111511	3.0	0.1	0.1	U	0.1	U								
Magnesium	MG	ICP	IP111671	5000.0	50.0	50.0	U	50.0	U								
Manganese	MN	ICP	IP111671	15.0	1.0	1.0	U	1.0	U								
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS111511	40.0	0.5	0.5	U	0.5	U								
Potassium	K	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U								
Selenium	SE	PMS	MS111511	5.0	0.5	0.5	U	0.5	U								
Sodium	NA	ICP	IP111671	5000.0	500.0	500.0	U	500.0	U								
Thallium	TL	PMS	MS111511	10.0	0.2	0.2	U	0.2	U								
Vanadium	V	PMS	MS111511	50.0	0.2	0.2	U	0.2	U								
Zinc	ZN	PMS	MS111511	20.0	4.0	4.0	U	4.0	U								

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB18	C	CCB19	C	CCB20	C	CCB21	C	CCB22	C	CCB23	C
Aluminum	AL	ICP	IP111671	200.0	50.0												
Antimony	SB	PMS	MS111511	60.0	0.2												
Arsenic	AS	PMS	MS111511	10.0	0.2												
Barium	BA	ICP	IP111671	200.0	3.0												
Beryllium	BE	PMS	MS111511	5.0	0.2												
Cadmium	CD	PMS	MS111511	5.0	0.1												
Calcium	CA	ICP	IP111671	5000.0	50.0												
Chromium	CR	PMS	MS111511	10.0	0.5												
Cobalt	CO	PMS	MS111511	50.0	0.2												
Copper	CU	PMS	MS111511	25.0	0.5												
Iron	FE	ICP	IP111671	100.0	50.0												
Lead	PB	PMS	MS111511	3.0	0.1												
Magnesium	MG	ICP	IP111671	5000.0	50.0												
Manganese	MN	ICP	IP111671	15.0	1.0												
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Nickel	NI	PMS	MS111511	40.0	0.5												
Potassium	K	ICP	IP111671	5000.0	500.0												
Selenium	SE	PMS	MS111511	5.0	0.5												
Sodium	NA	ICP	IP111671	5000.0	500.0												
Thallium	TL	PMS	MS111511	10.0	0.2												
Vanadium	V	PMS	MS111511	50.0	0.2												
Zinc	ZN	PMS	MS111511	20.0	4.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Beryllium	BE	PMS	MS111611	5.0	0.2	0.2	U	0.2	U	0.2	U						
Lead	PB	PMS	MS111611	3.0	0.1	0.1	U	0.1	U	0.1	U						
Zinc	ZN	PMS	MS111611	20.0	4.0	4.0	U	4.0	U	4.0	U						

VR34 : 00559

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

UNITS:ug/L

SDG: VR34

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Beryllium	BE	PMS	MS111911	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Lead	PB	PMS	MS111911	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Silver	AG	PMS	MS111911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS111911	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Beryllium	BE	PMS	MS111911	5.0	0.2	0.2	U	0.2	U	0.2	U						
Lead	PB	PMS	MS111911	3.0	0.1	0.1	U	0.1	U	0.1	U						
Silver	AG	PMS	MS111911	10.0	0.2	0.2	U	0.2	U	0.2	U						
Zinc	ZN	PMS	MS111911	20.0	4.0	4.0	U	4.0	U	4.0	U						

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Zinc	ZN	PMS	MS112011	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ICS SOURCE: I.V.

RUNID: IP111671

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	198988.9	194148.2	**97.1**	203627.5	201946.1	**101.0**	197978.0	196901.9	**98.5**
Antimony		1000	7.7	1012.6	**101.3**	8.0	1038.6	**103.9**	4.2	1032.5	**103.3**
Arsenic		1000	14.3	976.4	**97.6**	15.8	1005.5	**100.6**	16.4	1003.4	**100.3**
Barium		1000	-1.8	1005.3	**100.5**	-1.6	1064.1	**106.4**	-2.9	1020.2	**102.0**
Beryllium		1000	0.2	934.2	**93.4**	0.2	976.8	**97.7**	0.2	970.7	**97.1**
Boron			-0.6	-1.5		-2.7	-3.3		-3.6	-3.4	
Cadmium		1000	-0.3	1022.7	**102.3**	-0.2	1037.5	**103.8**	-0.6	1037.8	**103.8**
Calcium	100000	100000	97594.0	97457.4	**97.5**	101854.7	102165.0	**102.2**	98945.1	99798.3	**99.8**
Chromium		1000	-2.2	1004.0	**100.4**	-1.5	1056.9	**105.7**	-1.5	1039.4	**103.9**
Cobalt		1000	-0.8	992.3	**99.2**	-0.9	1021.2	**102.1**	-0.9	980.4	**98.0**
Copper		1000	-0.1	1023.3	**102.3**	0.3	1032.4	**103.2**	-0.4	1028.6	**102.9**
Iron	200000	200000	191940.1	191119.7	**95.6**	198295.7	198558.1	**99.3**	197639.7	199257.1	**99.6**
Lead		1000	2.2	960.2	**96.0**	1.0	986.9	**98.7**	2.6	982.0	**98.2**
Magnesium	100000	100000	102481.1	97554.2	**97.6**	105578.5	102153.7	**102.2**	98641.7	99250.0	**99.3**
Manganese		1000	0.5	957.2	**95.7**	0.7	994.8	**99.5**	0.7	992.7	**99.3**
Molybdenum			1.2	0.8		1.8	1.2		1.1	1.1	
Nickel		1000	0.1	937.2	**93.7**	0.4	986.2	**98.6**	0.0	954.9	**95.5**
Potassium			7.7	-29.1		14.4	-8.2		-7.9	-48.0	
Selenium		1000	16.9	967.0	**96.7**	17.4	997.2	**99.7**	14.3	998.0	**99.8**
Silicon			-1.6	-0.9		-1.4	0.1		0.8	3.0	
Silver		1000	-0.7	985.5	**98.6**	-0.8	999.7	**100.0**	-0.9	984.0	**98.4**
Sodium			16.3	30.9		10.2	26.9		12.8	23.4	
Strontium			3.9	3.7		3.9	3.9		3.9	3.9	
Thallium		1000	-0.6	911.1	**91.1**	-4.1	937.3	**93.7**	0.4	921.1	**92.1**
Tin			-7.6	-7.5		-8.7	-9.2		-7.4	-6.8	
Titanium			2.7	2.0		2.4	2.2		2.4	1.6	
Vanadium		1000	3.7	978.0	**97.8**	3.8	997.6	**99.8**	4.3	984.5	**98.5**
Zinc		1000	4.1	914.7	**91.5**	4.1	970.4	**97.0**	1.9	948.8	**94.9**

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ICS SOURCE: I.V.

RUNID: MS111511

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.4	**97.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.8	**99.0**						
Chromium		20	0.6	20.1	**100.5**						
Cobalt		20	0.0	19.8	**99.0**						
Copper		20	0.9	20.6	**103.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	417.3	421.0	**105.3**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	20.3	**101.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	0.9	20.0	**100.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

ICS SOURCE: I.V.

PROJECT: Upper Columbia

RUNID: MS111611

SDG: VR34

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.7	**98.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.7	**98.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	18.9	**94.5**						
Copper		20	1.2	20.9	**104.5**						
Manganese		20	0.1	19.4	**97.0**						
Molybdenum	400	400	449.1	461.4	**115.4**						
Nickel		20	0.4	20.0	**100.0**						
Selenium			-0.4	-0.4							
Silver		20	0.0	22.0	**110.0**						
Vanadium			0.1	0.1							
Zinc		20	1.7	19.8	**99.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ICS SOURCE: I.V.

RUNID: MS111911

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.3	**96.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.6	**98.0**						
Chromium		20	0.6	20.8	**104.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	1.2	20.8	**104.0**						
Manganese		20	0.1	19.0	**95.0**						
Molybdenum	400	400	426.2	433.4	**108.4**						
Nickel		20	0.4	20.6	**103.0**						
Selenium			-0.3	-0.3							
Silver		20	0.0	20.4	**102.0**						
Thorium			0.3	0.1							
Vanadium			0.2	0.1							
Zinc		20	1.3	19.9	**99.5**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ICS SOURCE: I.V.

RUNID: MS112011

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	20000	20000	19829.5	20042.9	**100.2**						
Antimony			0.1	0.1							
Arsenic		20	0.3	19.3	**96.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	20.0	**100.0**						
Chromium		20	0.6	20.4	**102.0**						
Cobalt		20	0.0	19.7	**98.5**						
Copper		20	1.2	21.6	**108.0**						
Iron	20000	20000	19313.8	19100.4	**95.5**						
Manganese		20	0.1	18.7	**93.5**						
Molybdenum	400	400	409.5	427.6	**106.9**						
Nickel		20	0.4	21.0	**105.0**						
Selenium			-0.3	-0.4							
Silver		20	0.0	21.1	**105.5**						
Thorium			0.3	0.1							
Vanadium			0.2	0.2							
Zinc		20	1.8	19.9	**99.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR34

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	SA4-6CA	VR34APOST	MS111511	457.26	B	5.80	B	500	Soil	**90.3**

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: ICP

SDG: VR34

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Aluminum	SA4-6CL	VR34A-L	Soil	IP111671	49859.16		51300.55		2.9	
Barium	SA4-6CL	VR34A-L	Soil	IP111671	800.85		822.80	B	2.7	
Calcium	SA4-6CL	VR34A-L	Soil	IP111671	24827.60		25264.25		1.8	
Iron	SA4-6CL	VR34A-L	Soil	IP111671	75905.14		78180.90		3.0	
Magnesium	SA4-6CL	VR34A-L	Soil	IP111671	18718.82		20131.55	B	7.5	
Manganese	SA4-6CL	VR34A-L	Soil	IP111671	4040.66		4147.20		2.6	
Potassium	SA4-6CL	VR34A-L	Soil	IP111671	7791.83		7954.35	B	2.1	
Sodium	SA4-6CL	VR34A-L	Soil	IP111671	532.06	B	2500.00	U	100.0	

ICP Serial Dilutions

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

ANALYSIS METHOD: PMS

SDG: VR34

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	MATRIX	RUNID	INITIAL SAMPLE RESULT (I)	C	SERIAL DILUTION RESULT (S)	C	% DIFFERENCE	Q
Antimony	SA4-6CL	VR34A-L	Soil	MS111511	0.29	B	0.30	B	3.4	
Arsenic	SA4-6CL	VR34A-L	Soil	MS111511	15.66		15.90	B	1.5	
Cadmium	SA4-6CL	VR34A-L	Soil	MS111511	8.94		9.90	B	10.7	
Chromium	SA4-6CL	VR34A-L	Soil	MS111511	23.87		25.40	B	6.4	
Cobalt	SA4-6CL	VR34A-L	Soil	MS111511	8.14	B	8.85	B	8.7	
Copper	SA4-6CL	VR34A-L	Soil	MS111511	24.55	B	25.20	B	2.6	
Nickel	SA4-6CL	VR34A-L	Soil	MS111511	20.80	B	21.15	B	1.7	
Selenium	SA4-6CL	VR34A-L	Soil	MS111511	0.21	U	0.20	B		
Thallium	SA4-6CL	VR34A-L	Soil	MS111511	0.43	B	0.50	B	16.3	
Vanadium	SA4-6CL	VR34A-L	Soil	MS111511	22.42	B	23.65	B	5.5	
Beryllium	SA4-6CL	VR34A-L	Soil	MS111911	0.48	B	0.50	B	4.2	
Lead	SA4-6CL	VR34A-L	Soil	MS111911	99.74		102.85		3.1	
Silver	SA4-6CL	VR34A-L	Soil	MS111911	0.37	B	0.40	B	8.1	
Zinc	SA4-6CL	VR34A-L	Soil	MS111911	83.84		97.85	B	16.7	

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Aluminum	AL	ICP	OPTIMA ICP 2	308.22		200	50.0	4/1/2012	250000.0	7/30/2012
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Cobalt	CO	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Vanadium	V	PMS	NEXION 300D MS	0.00		50	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

IEC DATE: 11/12/2012

SDG: VR34

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0581760	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1637240
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0091790	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0392710
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0130090
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0442360
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2393490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0412430
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5321920
Manganese	257.61	0.0046450	0.0000000	0.0000000	0.0000000	0.0019080	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054280
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0108090	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1069480
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1236770	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0477260	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0349450
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

IEC DATE: 11/12/2012

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0863140	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0084630	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1197150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 11/15/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA4-6C	VR34A	1.005	0.0	50.0
SA4-6CD	VR34ADUP	1.004	0.0	50.0
SA4-6CS	VR34ASPK	1.007	0.0	50.0
SA4-7C	VR34B	1.054	0.0	50.0
SA4-8C	VR34C	1.088	0.0	50.0
SA4-Field Duplicat	VR34D	1.058	0.0	50.0
SA5-3C	VR34E	1.048	0.0	50.0
SA5-4C	VR34F	1.042	0.0	50.0
SA5-7C	VR34G	1.048	0.0	50.0
SA5-Field Duplicat	VR34H	1.051	0.0	50.0
SA6-1C	VR34I	1.016	0.0	50.0
SA6-2C	VR34J	1.073	0.0	50.0
SA6-3C	VR34K	1.019	0.0	50.0
SA6-4C	VR34L	1.016	0.0	50.0
PBS	VR34MB1	1.000	0.0	50.0
LCSS	VR34MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 11/15/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA4-6C	VR34A	1.011	0.0	50.0
SA4-6CD	VR34ADUP	1.016	0.0	50.0
SA4-6CS	VR34ASPK	1.007	0.0	50.0
SA4-7C	VR34B	1.042	0.0	50.0
SA4-8C	VR34C	1.017	0.0	50.0
SA4-Field Duplicat	VR34D	1.024	0.0	50.0
SA5-3C	VR34E	1.032	0.0	50.0
SA5-4C	VR34F	1.009	0.0	50.0
SA5-7C	VR34G	1.035	0.0	50.0
SA5-Field Duplicat	VR34H	1.076	0.0	50.0
SA6-1C	VR34I	1.004	0.0	50.0
SA6-2C	VR34J	1.043	0.0	50.0
SA6-3C	VR34K	1.030	0.0	50.0
SA6-4C	VR34L	1.042	0.0	50.0
PBS	VR34MB1	1.000	0.0	50.0
LCSS	VR34MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 11/15/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SA4-6C	VR34A	0.738	0.0	50.0
SA4-6CD	VR34ADUP	0.741	0.0	50.0
SA4-6CS	VR34ASPK	0.734	0.0	50.0
SA4-7C	VR34B	0.740	0.0	50.0
SA4-8C	VR34C	0.739	0.0	50.0
SA4-Field Duplicat	VR34D	0.721	0.0	50.0
SA5-3C	VR34E	0.717	0.0	50.0
SA5-4C	VR34F	0.735	0.0	50.0
SA5-7C	VR34G	0.732	0.0	50.0
SA5-Field Duplicat	VR34H	0.750	0.0	50.0
SA6-1C	VR34I	0.713	0.0	50.0
SA6-2C	VR34J	0.728	0.0	50.0
SA6-3C	VR34K	0.710	0.0	50.0
SA6-4C	VR34L	0.714	0.0	50.0
PBS	VR34MB1	0.700	0.0	50.0
LCSW	VR34MB1SPK	0.700	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 11/16/2012

SDG: VR34 | RUNID: IP111671 | METHOD: ICP | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08401			X			X		X					X		X	X	X		X											
S2	S2	1.00	08443						X											X													
S3	S3	1.00	08473																														
S4	S4	1.00	08501																														
S5	S5	1.00	08522			X					X					X		X	X			X											
S2	S2	1.00	09033						X											X													
ICV	ICV	1.00	09052			X			X		X					X		X	X	X		X											
ICB	ICB	1.00	09091			X			X		X					X		X	X	X		X											
CRI	CRII	1.00	09132			X			X		X					X		X	X	X		X											
ICSA	ICSAI	1.00	09174			X			X		X					X		X	X	X		X											
ICSAB	ICSABI	1.00	09220			X			X		X					X		X	X	X		X											
CCV	CCV1	1.00	09265			X			X		X					X		X	X	X		X											
CCB	CCB1	1.00	09314			X			X		X					X		X	X	X		X											
ZZZZZZ	VR30B	5.00	09360																														
ZZZZZZ	VR30D	5.00	09400																														
ZZZZZZ	VR30E	5.00	09440																														
ZZZZZZ	VR30F	5.00	09480																														
ZZZZZZ	VR30G	5.00	09520																														
ZZZZZZ	VR30H	5.00	09560																														
CCV	CCV2	1.00	10000			X			X		X					X		X	X	X		X											
CCB	CCB2	1.00	10050			X			X		X					X		X	X	X		X											
ZZZZZZ	VR32A-L	5.00	10091																														
ZZZZZZ	VR32A	5.00	10131																														
ZZZZZZ	VR32ADUP	5.00	10171																														
ZZZZZZ	VR32ASPK	5.00	10212																														
ZZZZZZ	ZZZZZZ	5.00	10250																														
ZZZZZZ	VR32L	5.00	10280																														
CCV	CCV3	1.00	10321			X			X		X					X		X	X	X		X											
CCB	CCB3	1.00	10361			X			X		X					X		X	X	X		X											
CRI	CRIF	1.00	10403			X			X		X					X		X	X	X		X											
ICSA	ICSAF	1.00	10445			X			X		X					X		X	X	X		X											
ICSAB	ICSABF	1.00	10490			X			X		X					X		X	X	X		X											
CCV	CCV4	1.00	10525			X			X		X					X		X	X	X		X											
CCB	CCB4	1.00	10575			X			X		X					X		X	X	X		X											
PBS	VR34MB1	2.00	11020																														

FORM XIV

Analysis Run Log

ANALYSIS RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

INSTRUMENT ID: OPTIMA ICP 2

START DATE: 11/16/2012

SDG: VR34

RUNID: IP111671

METHOD: ICP

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
SA4-7C	VR34B	5.00	11062																														
SA4-8C	VR34C	5.00	11102																														
SA4-Field Duplicat	VR34D	5.00	11142																														
ZZZZZZ	ZZZZZZ	25.00	11182																														
SA4-6C	VR34A	5.00	11222																														
SA4-6CD	VR34ADUP	5.00	11262																														
SA4-6CS	VR34ASPK	5.00	11302																														
ZZZZZZ	ZZZZZZ	5.00	11341																														
LCSS	VR34MB1SPK	2.00	11380																														
CCV	CCV5	1.00	11420			X			X		X					X		X	X	X		X											
CCB	CCB5	1.00	11465			X			X		X					X		X	X	X		X											
CCV	CCV6	1.00	12110			X			X		X					X		X	X	X		X											
CCB	CCB6	1.00	12155			X			X		X					X		X	X	X		X											
SA5-3C	VR34E	5.00	12201			X			X		X					X		X	X	X		X											
SA5-4C	VR34F	5.00	12241			X			X		X					X		X	X	X		X											
SA5-7C	VR34G	5.00	12281			X			X		X					X		X	X	X		X											
SA5-Field Duplicat	VR34H	5.00	12321			X			X		X					X		X	X	X		X											
SA6-1C	VR34I	5.00	12361			X			X		X					X		X	X	X		X											
SA6-2C	VR34J	5.00	12401			X			X		X					X		X	X	X		X											
SA6-3C	VR34K	5.00	12441			X			X		X					X		X	X	X		X											
SA6-4C	VR34L	5.00	12482			X			X		X					X		X	X	X		X											
CCV	CCV7	1.00	12522			X			X		X					X		X	X	X		X											
CCB	CCB7	1.00	12572			X			X		X					X		X	X	X		X											
CCV	CCV8	1.00	13294			X			X		X					X		X	X	X		X											
CCB	CCB8	1.00	13345			X			X		X					X		X	X	X		X											
PBS	VR34MB1	2.00	13391			X			X		X					X		X	X	X		X											
SA4-7C	VR34B	5.00	13432			X			X		X					X		X	X	X		X											
SA4-8C	VR34C	5.00	13472			X			X		X					X		X	X	X		X											
SA4-Field Duplicat	VR34D	5.00	13513			X			X		X					X		X	X	X		X											
SA4-6CL	VR34A-L	25.00	13553			X			X		X					X		X	X	X		X											
SA4-6C	VR34A	5.00	13593			X			X		X					X		X	X	X		X											
SA4-6CD	VR34ADUP	5.00	14033			X			X		X					X		X	X	X		X											
SA4-6CS	VR34ASPK	5.00	14073			X			X		X					X		X	X	X		X											
ZZZZZZ	ZZZZZZ	5.00	14113																														
LCSS	VR34MB1SPK	2.00	14153			X			X		X					X		X	X	X		X											

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia INSTRUMENT ID: OPTIMA ICP 2 START DATE: 11/16/2012

SDG: VR34 RUNID: IP111671 METHOD: ICP END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	CCV9	1.00	14193			X			X		X					X		X	X	X		X											
CCB	CCB9	1.00	14234			X			X		X					X		X	X	X		X											
ZZZZZZ	VR33MB1	2.00	14280																														
ZZZZZZ	VR33B	5.00	14321																														
ZZZZZZ	VR33C	5.00	14361																														
ZZZZZZ	VR33D	5.00	14400																														
ZZZZZZ	VR33A-L	25.00	14440																														
ZZZZZZ	VR33A	5.00	14480																														
ZZZZZZ	VR33ADUP	5.00	14520																														
ZZZZZZ	VR33ASPK	5.00	14561																														
ZZZZZZ	ZZZZZZ	5.00	15001																														
ZZZZZZ	VR33MB1SPK	2.00	15031																														
CCV	CCV10	1.00	15071			X			X		X					X		X	X	X		X											
CCB	CCB10	1.00	15120			X			X		X					X		X	X	X		X											
CCV	CCV11	1.00	15171			X			X		X					X		X	X	X		X											
CCB	CCB11	1.00	15212			X			X		X					X		X	X	X		X											
ZZZZZZ	VR33E	5.00	15270																														
ZZZZZZ	VR33F	5.00	15310																														
ZZZZZZ	VR33G	5.00	15350																														
ZZZZZZ	VR33H	5.00	15390																														
ZZZZZZ	VR33I	5.00	15430																														
ZZZZZZ	VR33J	5.00	15470																														
ZZZZZZ	VR33K	5.00	15511																														
ZZZZZZ	VR33L	5.00	15551																														
CCV	CCV12	1.00	15591			X			X		X					X		X	X	X		X											
CCB	CCB12	1.00	16041			X			X		X					X		X	X	X		X											
CRI	CRIF1	1.00	16083			X			X		X					X		X	X	X		X											
ICSA	ICSAF1	1.00	16125			X			X		X					X		X	X	X		X											
ICSAB	ICSABF1	1.00	16170			X			X		X					X		X	X	X		X											
CCV	CCV13	1.00	16205			X			X		X					X		X	X	X		X											
CCB	CCB13	1.00	16250			X			X		X					X		X	X	X		X											

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111511 METHOD: PMS

START DATE: 11/15/2012

END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11590				X			X		X	X	X	X								X	X	X	X				X		X	X
S1	S1	1.00	12030				X			X		X	X	X	X								X	X	X	X				X		X	X
S2	S2	1.00	12070				X			X		X	X	X	X								X	X	X	X				X		X	X
S3	S3	1.00	12110				X			X		X	X	X	X								X	X	X	X				X		X	X
S4	S4	1.00	12160				X			X		X	X	X	X								X	X	X	X				X		X	X
S5	S5	1.00	12220																														
ZZZZZZ	Rinse sampl	1.00	12290																														
ZZZZZZ	ZZZZZZ	1.00	12370																														
ICV	MICV	1.00	12450				X			X		X	X	X	X								X	X	X	X				X		X	X
ICB	ICB	1.00	12540				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV1	1.00	12580				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB1	1.00	13050				X			X		X	X	X	X								X	X	X	X				X		X	X
CRI	MCRI	1.00	13090				X			X		X	X	X	X								X	X	X	X				X		X	X
ICSA	ICSAI	1.00	13130				X			X		X	X	X	X								X	X	X	X				X		X	X
ICSAB	ICSABI	1.00	13190				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	LR200	1.00	13260																														
ZZZZZZ	LR300	1.00	13330																														
ZZZZZZ	B1	1.00	13400																														
ZZZZZZ	B2	1.00	13460																														
ZZZZZZ	B3	1.00	13520																														
CCV	MCCV2	1.00	13560				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB2	1.00	14030				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31MB1	20.00	14070																														
ZZZZZZ	VR31MB1SPK	20.00	14110																														
ZZZZZZ	VR31A-L	100.00	14160																														
ZZZZZZ	VR31A	20.00	14200																														
ZZZZZZ	VR31ADUP	20.00	14240																														
ZZZZZZ	VR31ASPK	20.00	14280																														
ZZZZZZ	VR31APOST	20.00	14320																														
ZZZZZZ	VR31C	20.00	14360																														
ZZZZZZ	VR31D	20.00	14410																														
ZZZZZZ	VR31E	20.00	14450																														
CCV	MCCV3	1.00	14500				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB3	1.00	14560				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR31J	20.00	15150																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR34 | RUNID: MS111511 METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR31F	20.00	15190																														
ZZZZZZ	VR31H	20.00	15240																														
ZZZZZZ	VR31K	100.00	15280																														
ZZZZZZ	VR31K	20.00	15320																														
ZZZZZZ	VR31L	20.00	15360																														
ZZZZZZ	VR31I	20.00	15420																														
ZZZZZZ	VR31G	20.00	15460																														
ZZZZZZ	VR31B	400.00	15500																														
ZZZZZZ	VR31B	20.00	15540																														
CCV	MCCV4	1.00	15580				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB4	1.00	16050				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR30MB1	20.00	16120																														
ZZZZZZ	VR30MB1SPK	20.00	16160																														
ZZZZZZ	VR30A-L	100.00	16210																														
ZZZZZZ	VR30A	20.00	16250																														
ZZZZZZ	VR30ADUP	20.00	16290																														
ZZZZZZ	VR30ASPK	20.00	16330																														
ZZZZZZ	VR30APOST	20.00	16370																														
ZZZZZZ	VR30B	20.00	16410																														
ZZZZZZ	VR30C	20.00	16460																														
ZZZZZZ	VR30D	20.00	16500																														
CCV	MCCV5	1.00	16550				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB5	1.00	17020				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32MB1	20.00	17070																														
ZZZZZZ	VR32MB1SPK	20.00	17110																														
ZZZZZZ	VR30E	20.00	17160																														
ZZZZZZ	VR30F	20.00	17200																														
ZZZZZZ	VR30G	20.00	17240																														
ZZZZZZ	VR30H	20.00	17280																														
ZZZZZZ	VR30I	20.00	17320																														
ZZZZZZ	VR30J	20.00	17360																														
ZZZZZZ	VR30K	20.00	17410																														
ZZZZZZ	VR30L	20.00	17450																														
CCV	MCCV6	1.00	17500				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB6	1.00	17560				X			X		X	X	X	X								X	X	X	X				X		X	X

FORM XIV

Analysis Run Log

ANALYSIS RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111511 METHOD: PMS

START DATE: 11/15/2012

END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	18020				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV7	1.00	18060				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB7	1.00	18130				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR32A-L	100.00	18180																														
ZZZZZZ	VR32A	20.00	18220																														
ZZZZZZ	VR32ADUP	20.00	18260																														
ZZZZZZ	VR32ASPK	20.00	18300																														
ZZZZZZ	VR32APOST	20.00	18340																														
ZZZZZZ	VR32B	20.00	18390																														
ZZZZZZ	VR32C	20.00	18430																														
ZZZZZZ	VR32D	20.00	18470																														
ZZZZZZ	VR32E	20.00	18520																														
ZZZZZZ	VR32F	20.00	18560																														
CCV	MCCV8	1.00	19000				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB8	1.00	19070				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR33MB1	20.00	19110																														
ZZZZZZ	VR33MB1SPK	20.00	19160																														
ZZZZZZ	VR32G	20.00	19200																														
ZZZZZZ	VR32H	20.00	19240																														
ZZZZZZ	VR32I	20.00	19280																														
ZZZZZZ	VR32J	20.00	19320																														
ZZZZZZ	VR32K	20.00	19360																														
ZZZZZZ	VR32L	20.00	19400																														
ZZZZZZ	VR33B	20.00	19450																														
ZZZZZZ	VR33C	20.00	19500																														
CCV	MCCV9	1.00	19540				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB9	1.00	20010				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR33A-L	100.00	20050																														
ZZZZZZ	VR33A	20.00	20090																														
ZZZZZZ	VR33ADUP	20.00	20130																														
ZZZZZZ	VR33ASPK	20.00	20170																														
ZZZZZZ	VR33APOST	20.00	20210																														
ZZZZZZ	VR33D	20.00	20250																														
ZZZZZZ	VR33E	20.00	20300																														
ZZZZZZ	VR33F	20.00	20340																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/15/2012

SDG: VR34 | RUNID: MS111511 METHOD: PMS | END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR33G	20.00	20390																														
ZZZZZZ	VR33H	20.00	20430																														
CCV	MCCV10	1.00	20470				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB10	1.00	20540				X			X		X	X	X	X								X	X	X	X				X		X	X
PBS	VR34MB1	20.00	20580				X					X	X	X	X								X	X	X	X				X		X	X
LCSS	VR34MB1SPK	20.00	21020				X					X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR33I	20.00	21060																														
ZZZZZZ	VR33J	20.00	21100																														
ZZZZZZ	VR33K	20.00	21150																														
ZZZZZZ	VR33L	20.00	21190																														
SA4-7C	VR34B	20.00	21230				X					X	X	X	X								X		X	X				X		X	X
SA4-8C	VR34C	20.00	21270				X					X	X	X	X								X	X	X	X				X		X	X
SA4-Field Duplicat	VR34D	20.00	21320				X					X	X	X	X								X		X	X				X		X	
SA5-3C	VR34E	20.00	21360				X					X	X	X	X								X		X	X				X		X	
CCV	MCCV11	1.00	21400				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB11	1.00	21470				X			X		X	X	X	X								X	X	X	X				X		X	X
SA4-6CL	VR34A-L	100.00	21510				X					X	X	X	X								X		X	X				X		X	
SA4-6C	VR34A	20.00	21560				X					X	X	X	X								X		X	X				X		X	
SA4-6CD	VR34ADUP	20.00	22000				X					X	X	X	X								X		X	X				X		X	
SA4-6CS	VR34ASPK	20.00	22040				X					X	X	X	X								X		X	X				X		X	
SA4-6CA	VR34APOST	20.00	22080																						X								
SA5-4C	VR34F	20.00	22120				X					X	X	X	X								X		X	X				X		X	
SA5-7C	VR34G	20.00	22160				X					X	X	X	X								X	X	X	X				X		X	
SA5-Field Duplicat	VR34H	20.00	22200				X					X	X	X	X								X	X	X	X				X		X	
SA6-1C	VR34I	20.00	22260				X					X	X	X	X								X		X	X				X		X	
SA6-2C	VR34J	20.00	22300				X					X	X	X	X								X		X	X				X		X	
CCV	MCCV12	1.00	22340				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB12	1.00	22410				X			X		X	X	X	X								X	X	X	X				X		X	X
ZZZZZZ	VR73MB1	2.00	22450																														
ZZZZZZ	VR73MB1SPK	2.00	22490																														
ZZZZZZ	VR73A	2.00	22530																														
ZZZZZZ	VR73B	2.00	22570																														
ZZZZZZ	VR73C	2.00	23010																														
ZZZZZZ	VR73D	2.00	23050																														
ZZZZZZ	VR73F	2.00	23100																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111511 METHOD: PMS

START DATE: 11/15/2012

END DATE: 11/15/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR73H	2.00	23140																														
SA6-3C	VR34K	20.00	23190				X			X		X	X	X	X								X		X	X				X		X	
SA6-4C	VR34L	20.00	23230				X			X		X	X	X	X								X	X	X	X				X		X	X
CCV	MCCV13	1.00	23270				X			X		X	X	X	X								X	X	X	X				X		X	X
CCB	CCB13	1.00	23340				X			X		X	X	X	X								X	X	X	X				X		X	X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/16/2012

SDG: VR34 | RUNID: MS111611 METHOD: PMS | END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	14450							X														X									X
S1	S1	1.00	14490							X														X									X
S2	S2	1.00	14540							X														X									X
S3	S3	1.00	14580							X														X									X
S4	S4	1.00	15030							X														X									X
S5	S5	1.00	15090																														
ZZZZZZ	Rinse sampl	1.00	15160																														
ICV	MICV	1.00	15220							X														X									X
ICB	ICB	1.00	15290							X														X									X
CCV	MCCV1	1.00	15330							X														X									X
CCB	CCB1	1.00	15400							X														X									X
CRI	MCRI	1.00	15440							X														X									X
ZZZZZZ	ZZZZZZ	1.00	15480																														
ICSAB	ICSABI	1.00	15550							X														X									X
ZZZZZZ	LR200	1.00	16020																														
ZZZZZZ	LR300	1.00	16090																														
ZZZZZZ	B1	1.00	16150																														
ZZZZZZ	B2	1.00	16210																														
ICSA	ICSAI	1.00	16270							X														X									X
ZZZZZZ	B3	1.00	16320																														
CCV	MCCV2	1.00	16370							X														X									X
CCB	CCB2	1.00	16440							X														X									X
ZZZZZZ	VR32MB1	20.00	16480																														
ZZZZZZ	VR32MB1SPK	20.00	16520																														
ZZZZZZ	VR30E	20.00	16560																														
ZZZZZZ	VR30F	20.00	17010																														
ZZZZZZ	VR30G	20.00	17050																														
ZZZZZZ	VR30H	20.00	17090																														
ZZZZZZ	VR30I	20.00	17130																														
ZZZZZZ	VR30J	20.00	17170																														
ZZZZZZ	VR30K	20.00	17220																														
ZZZZZZ	VR30L	20.00	17260																														
CCV	MCCV3	1.00	17310							X														X									X
CCB	CCB3	1.00	17370							X														X									X
ZZZZZZ	VR32A-L	100.00	17430																														

FORM XIV

VR34 9056

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111611 METHOD: PMS

START DATE: 11/16/2012

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR32A	20.00	17470																														
ZZZZZZ	VR32ADUP	20.00	17510																														
ZZZZZZ	VR32ASPK	20.00	17550																														
ZZZZZZ	VR32B	20.00	17590																														
ZZZZZZ	VR32C	20.00	18030																														
ZZZZZZ	VR32D	20.00	18090																														
ZZZZZZ	VR32E	100.00	18130																														
ZZZZZZ	VR32F	20.00	18170																														
ZZZZZZ	VR32G	20.00	18210																														
CCV	MCCV4	1.00	18250							X														X									X
CCB	CCB4	1.00	18320							X														X									X
ZZZZZZ	VR33MB1	20.00	18380																														
ZZZZZZ	VR33MB1SPK	20.00	18420																														
ZZZZZZ	VR32H	20.00	18460																														
ZZZZZZ	VR32I	20.00	18500																														
ZZZZZZ	VR32J	20.00	18550																														
ZZZZZZ	VR32K	20.00	18590																														
ZZZZZZ	VR32L	100.00	19030																														
ZZZZZZ	VR32L	20.00	19070																														
ZZZZZZ	VR33B	20.00	19120																														
ZZZZZZ	VR33C	20.00	19160																														
CCV	MCCV5	1.00	19200							X														X									X
CCB	CCB5	1.00	19270							X														X									X
ZZZZZZ	VR33A-L	500.00	19350																														
ZZZZZZ	VR33A	100.00	19390																														
ZZZZZZ	VR33ADUP	100.00	19430																														
ZZZZZZ	VR33ASPK	100.00	19480																														
ZZZZZZ	VR33C	100.00	19520																														
ZZZZZZ	VR33E	100.00	19560																														
ZZZZZZ	VR33I	20.00	20000																														
ZZZZZZ	VR33J	100.00	20040																														
ZZZZZZ	VR33J	20.00	20090																														
ZZZZZZ	VR32E	20.00	20130																														
CCV	MCCV6	1.00	20180							X														X									X
CCB	CCB6	1.00	20240							X														X									X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111611 METHOD: PMS

START DATE: 11/16/2012

END DATE: 11/16/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
PBS	VR34MB1	20.00	20290							X																							
LCSS	VR34MB1SPK	20.00	20330							X																							
ZZZZZZ	VR33K	100.00	20370																														
ZZZZZZ	VR33K	20.00	20410																														
ZZZZZZ	VR33L	20.00	20450																														
SA4-7C	VR34B	100.00	20490																					X									
SA4-7C	VR34B	20.00	20530							X																							
SA4-8C	VR34C	20.00	20570							X																							
SA4-Field Duplicat	VR34D	100.00	21030																					X									X
SA4-Field Duplicat	VR34D	20.00	21070							X																							
CCV	MCCV7	1.00	21110							X														X									X
CCB	CCB7	1.00	21180							X														X									X
SA5-3C	VR34E	100.00	21220																					X									X
SA5-3C	VR34E	20.00	21260							X																							
SA5-Field Duplicat	VR34H	100.00	21300																														X
SA5-Field Duplicat	VR34H	20.00	21340							X																							
SA6-1C	VR34I	100.00	21380																					X									X
SA6-1C	VR34I	20.00	21430							X																							
SA6-2C	VR34J	100.00	21470																					X									X
SA6-2C	VR34J	20.00	21510							X																							
SA6-3C	VR34K	100.00	21560																					X									X
ZZZZZZ	VR73A	20.00	22000																														
CCV	MCCV8	1.00	22040							X														X									X
CCB	CCB8	1.00	22110							X														X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111911 METHOD: PMS

START DATE: 11/19/2012

END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	12460		X					X														X									X
S1	S1	1.00	12500		X					X														X									X
S2	S2	1.00	12540		X					X														X									X
S3	S3	1.00	12590		X					X														X									X
S4	S4	1.00	13030		X					X														X									X
S5	S5	1.00	13090																														
ZZZZZZ	Rinse sampl	1.00	13160																														
ICV	MICV	1.00	13230		X					X														X									X
ICB	ICB	1.00	13300		X					X														X									X
CCV	MCCV1	1.00	13340		X					X														X									X
CCB	CCB1	1.00	13410		X					X														X									X
CRI	MCRI	1.00	13450		X					X														X									X
ICSA	ICSAI	1.00	13490		X					X														X									X
ICSAB	ICSABI	1.00	13550		X					X														X									X
ZZZZZZ	LR200	1.00	14020																														
ZZZZZZ	LR300	1.00	14090																														
ZZZZZZ	B1	1.00	14160																														
ZZZZZZ	B2	1.00	14220																														
ZZZZZZ	B3	1.00	14280																														
CCV	MCCV2	1.00	14320		X					X														X									X
CCB	CCB2	1.00	14390		X					X														X									X
ZZZZZZ	VR32A-L	100.00	14460																														
ZZZZZZ	VR32A	20.00	14500																														
ZZZZZZ	VR32ADUP	20.00	14540																														
ZZZZZZ	VR32ASPK	20.00	14580																														
ZZZZZZ	VR32B	20.00	15020																														
ZZZZZZ	VR32C	20.00	15060																														
ZZZZZZ	VR32D	20.00	15100																														
ZZZZZZ	VR32E	20.00	15150																														
ZZZZZZ	VR32F	20.00	15200																														
ZZZZZZ	VR32G	20.00	15240																														
CCV	MCCV3	1.00	15280		X					X														X									X
CCB	CCB3	1.00	15350		X					X														X									X
ZZZZZZ	VR33MB1	20.00	15410																														
ZZZZZZ	VR33MB1SPK	20.00	15450																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS111911 METHOD: PMS

START DATE: 11/19/2012

END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR32H	20.00	15490																														
ZZZZZZ	VR32I	20.00	15530																														
ZZZZZZ	VR32J	20.00	15570																														
ZZZZZZ	VR32K	20.00	16010																														
ZZZZZZ	VR32L	100.00	16070																														
ZZZZZZ	VR32L	20.00	16110																														
ZZZZZZ	VR33C	100.00	16150																														
ZZZZZZ	VR33C	20.00	16190																														
CCV	MCCV4	1.00	16230		X					X														X									X
CCB	CCB4	1.00	16300		X					X														X									X
ZZZZZZ	VR33A-L	100.00	16350																														
ZZZZZZ	VR33A	20.00	16390																														
ZZZZZZ	VR33ADUP	20.00	16430																														
ZZZZZZ	VR33ASPK	20.00	16470																														
ZZZZZZ	VR33B	20.00	16520																														
ZZZZZZ	VR33D	20.00	16560																														
ZZZZZZ	VR33E	20.00	17000																														
ZZZZZZ	VR33F	20.00	17040																														
ZZZZZZ	VR33G	20.00	17090																														
ZZZZZZ	VR33H	20.00	17130																														
CCV	MCCV5	1.00	17170		X					X														X									X
CCB	CCB5	1.00	17240		X					X														X									X
SA4-6CL	VR34A-L	500.00	17340																					X									X
SA4-6C	VR34A	100.00	17380																					X									X
SA4-6CD	VR34ADUP	100.00	17420																					X									X
SA4-6CS	VR34ASPK	100.00	17460																					X									X
SA4-7C	VR34B	20.00	17500		X																												
SA4-8C	VR34C	20.00	17550		X																												
ZZZZZZ	VR33I	20.00	17590																														
ZZZZZZ	VR33J	20.00	18030																														
ZZZZZZ	VR33K	20.00	18080																														
ZZZZZZ	VR33L	20.00	18120																														
CCV	MCCV6	1.00	18160		X					X														X									X
CCB	CCB6	1.00	18230		X					X														X									X
PBS	VR34MB1	20.00	18290		X																												

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/19/2012

SDG: VR34 | RUNID: MS111911 METHOD: PMS | END DATE: 11/19/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
LCSS	VR34MB1SPK	20.00	18330		X																												
SA4-6CL	VR34A-L	100.00	18370		X					X																							
SA4-6C	VR34A	20.00	18410		X					X																							
SA4-6CD	VR34ADUP	20.00	18450		X					X																							
SA4-6CS	VR34ASPK	20.00	18490		X					X																							
SA4-Field Duplicat	VR34D	20.00	18530		X																												
SA5-3C	VR34E	20.00	18570		X																												
SA5-4C	VR34F	100.00	19030																					X									X
SA5-4C	VR34F	20.00	19070		X					X																							
CCV	MCCV7	1.00	19110		X					X														X									X
CCB	CCB7	1.00	19180		X					X														X									X
ZZZZZZ	VR73MB1	2.00	19230																														
ZZZZZZ	VR73MB1SPK	2.00	19270																														
SA5-7C	VR34G	20.00	19310		X					X																							
SA5-Field Duplicat	VR34H	20.00	19350		X																												
SA6-1C	VR34I	20.00	19390		X																												
SA6-2C	VR34J	20.00	19430		X																												
SA6-3C	VR34K	20.00	19480		X																												
SA6-4C	VR34L	20.00	19520		X																												
ZZZZZZ	VR73A	20.00	19570																														
ZZZZZZ	VR73C	20.00	20020																														
CCV	MCCV8	1.00	20060		X					X														X									X
CCB	CCB8	1.00	20130		X					X														X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: NEXION 300D MS | START DATE: 11/20/2012

SDG: VR34 | RUNID: MS112011 METHOD: PMS | END DATE: 11/20/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10120																														X
S1	S1	1.00	10160																														X
S2	S2	1.00	10210																														X
S3	S3	1.00	10250																														X
S4	S4	1.00	10300																														X
S5	S5	1.00	10360																														
ZZZZZZ	Rinse sampl	1.00	10430																														
ICV	MICV	1.00	10500																														X
ICB	ICB	1.00	10570																														X
CCV	MCCV1	1.00	11010																														X
CCB	CCB1	1.00	11080																														X
CRI	MCRI	1.00	11120																														X
ICSA	ICSAI	1.00	11160																														X
ICSAB	ICSABI	1.00	11230																														X
ZZZZZZ	LR200	1.00	11300																														
ZZZZZZ	LR300	1.00	11370																														
ZZZZZZ	B1	1.00	11440																														
ZZZZZZ	B2	1.00	11500																														
ZZZZZZ	B3	1.00	11560																														
CCV	MCCV2	1.00	12000																														X
CCB	CCB2	1.00	12070																														X
ZZZZZZ	VS84MB	2.00	12120																														
ZZZZZZ	VS84MBSPK	2.00	12170																														
ZZZZZZ	VS84B	2.00	12210																														
ZZZZZZ	VS84C	2.00	12250																														
ZZZZZZ	VS84ADUP	20.00	12290																														
ZZZZZZ	VS84A	20.00	12340																														
ZZZZZZ	VS84ASPK	20.00	12380																														
ZZZZZZ	VS84ADUP	2.00	12420																														
ZZZZZZ	VS84A	2.00	12470																														
ZZZZZZ	VS84ASPK	2.00	12520																														
CCV	MCCV3	1.00	12560																														X
CCB	CCB3	1.00	13030																														X
ZZZZZZ	VR36A-L	500.00	13090																														
ZZZZZZ	VR36A	100.00	13130																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: NEXION 300D MS

RUNID: MS112011 METHOD: PMS

START DATE: 11/20/2012

END DATE: 11/20/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR36ADUP	100.00	13180																														
ZZZZZZ	VR36ASPK	100.00	13220																														
ZZZZZZ	VR36B	100.00	13260																														
ZZZZZZ	VR36C	100.00	13300																														
ZZZZZZ	VR36D	100.00	13360																														
ZZZZZZ	VR36H	100.00	13400																														
ZZZZZZ	VR36I	100.00	13440																														
ZZZZZZ	VR36J	100.00	13480																														
CCV	MCCV4	1.00	13530																														X
CCB	CCB4	1.00	14000																														X
ZZZZZZ	VR36K	100.00	14130																														
ZZZZZZ	VR37D	100.00	14170																														
ZZZZZZ	VR37E	100.00	14210																														
ZZZZZZ	VR37F	100.00	14260																														
ZZZZZZ	VR37G	100.00	14300																														
ZZZZZZ	VR37H	100.00	14340																														
ZZZZZZ	VR37J	100.00	14380																														
ZZZZZZ	VR37N	100.00	14430																														
ZZZZZZ	VR37O	100.00	14480																														
SA5-7C	VR34G	100.00	14520																														X
CCV	MCCV5	1.00	14560																														X
CCB	CCB5	1.00	15030																														X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701

METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	06462														X																
S0.1	S0.1	1.00	06475														X																
S0.5	S0.5	1.00	06493														X																
S1	S1	1.00	06511														X																
S2	S2	1.00	06524														X																
S5	S5	1.00	06542														X																
S10	S10	1.00	06560														X																
ICV	AICV	1.00	07050														X																
ICB	ICB	1.00	07063														X																
CCV	ACCV1	1.00	07081														X																
CCB	CCB1	1.00	07095														X																
CRA	CRA	1.00	07113														X																
ZZZZZZ	VS18MB1	1.00	07130																														
ZZZZZZ	VS18MB1SPK	1.00	07144																														
ZZZZZZ	VS18A	1.00	07161																														
ZZZZZZ	VS18ADUP	1.00	07175																														
ZZZZZZ	VS18ASPK	1.00	07193																														
ZZZZZZ	VS18B	1.00	07210																														
ZZZZZZ	VS18C	1.00	07224																														
ZZZZZZ	VS18D	1.00	07242																														
ZZZZZZ	VS18E	1.00	07260																														
CCV	ACCV2	1.00	07274														X																
CCB	CCB2	1.00	07292														X																
ZZZZZZ	VS18F	1.00	07310																														
ZZZZZZ	VS18G	1.00	07323																														
ZZZZZZ	VS18H	1.00	07341																														
ZZZZZZ	VS18I	1.00	07354																														
ZZZZZZ	VS18J	1.00	07372																														
ZZZZZZ	VS18K	1.00	07385																														
ZZZZZZ	VS18L	1.00	07403																														
ZZZZZZ	VR37MB1	1.00	07421																														
ZZZZZZ	VR37MB1SPK	1.00	07434																														
ZZZZZZ	VR37A	1.00	07452																														
CCV	ACCV3	1.00	07470														X																
CCV	ACCV4	1.00	07584														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR34 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB3	1.00	08002														X																
ZZZZZZ	VS18F	1.00	08020																														
ZZZZZZ	VS18G	1.00	08033																														
ZZZZZZ	VS18H	1.00	08051																														
ZZZZZZ	VS18I	1.00	08064																														
ZZZZZZ	VS18J	1.00	08082																														
ZZZZZZ	VS18K	1.00	08095																														
ZZZZZZ	VS18L	1.00	08113																														
ZZZZZZ	VR37MB1	1.00	08131																														
ZZZZZZ	VR37MB1SPK	1.00	08144																														
ZZZZZZ	VR37A	1.00	08162																														
CCV	ACCV5	1.00	08180														X																
CCB	CCB4	1.00	08194														X																
ZZZZZZ	VR37ADUP	1.00	08212																														
ZZZZZZ	VR37ASPK	1.00	08230																														
ZZZZZZ	VR37B	1.00	08243																														
ZZZZZZ	VR37C	1.00	08261																														
ZZZZZZ	VR37D	1.00	08274																														
ZZZZZZ	VR37E	1.00	08292																														
ZZZZZZ	VR37F	1.00	08310																														
ZZZZZZ	VR37G	1.00	08323																														
ZZZZZZ	VR37H	1.00	08341																														
ZZZZZZ	VR37I	1.00	08355																														
CCV	ACCV6	1.00	08373														X																
CCB	CCB5	1.00	08391														X																
ZZZZZZ	VR37J	1.00	08404																														
ZZZZZZ	VR37K	1.00	08422																														
ZZZZZZ	VR37L	1.00	08440																														
ZZZZZZ	VR37M	1.00	08454																														
ZZZZZZ	VR37N	1.00	08472																														
ZZZZZZ	VR37O	1.00	08485																														
ZZZZZZ	VR58MB1	1.00	08503																														
ZZZZZZ	VR58MB1SPK	1.00	08520																														
ZZZZZZ	VR58A	1.00	08534																														
ZZZZZZ	VR58ADUP	1.00	08552																														

FORM XIV

VR34 : 9005

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701

METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV7	1.00	08565																X														
CCB	CCB6	1.00	08584																X														
ZZZZZZ	VR58ASPK	1.00	09001																										
ZZZZZZ	VR58B	1.00	09015																										
ZZZZZZ	VR58C	1.00	09033																										
ZZZZZZ	VR58D	1.00	09051																										
ZZZZZZ	VR58E	1.00	09065																										
ZZZZZZ	VR58F	1.00	09082																										
ZZZZZZ	VR58G	1.00	09100																										
ZZZZZZ	VR58H	1.00	09114																										
ZZZZZZ	VR58I	1.00	09131																										
ZZZZZZ	VR58J	1.00	09145																										
CCV	ACCV8	1.00	09163															X															
CCB	CCB7	1.00	09181															X															
ZZZZZZ	VR82A	1.00	09195																										
ZZZZZZ	VR82B	1.00	09213																										
ZZZZZZ	VR82C	1.00	09230																										
ZZZZZZ	VR82D	1.00	09244																										
ZZZZZZ	VR82E	1.00	09262																										
ZZZZZZ	VR82F	1.00	09280																										
ZZZZZZ	VR82G	1.00	09294																										
ZZZZZZ	VR82H	1.00	09311																										
ZZZZZZ	VR82I	1.00	09325																										
CCV	ACCV9	1.00	09343															X															
CCB	CCB8	1.00	09361															X															
ZZZZZZ	VR30MB1	1.00	09382																										
ZZZZZZ	VR30MB1SPK	1.00	09395																										
ZZZZZZ	VR30A	1.00	09413																										
ZZZZZZ	VR30ADUP	1.00	09430																										
ZZZZZZ	VR30ASPK	1.00	09444																										
ZZZZZZ	VR30B	1.00	09461																										
ZZZZZZ	VR30C	1.00	09475																										
ZZZZZZ	VR30D	1.00	09492																										
ZZZZZZ	VR30E	1.00	09510																										
ZZZZZZ	VR30F	1.00	09524																										

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV10	1.00	09542														X																
CCB	CCB9	1.00	09560														X																
ZZZZZZ	VR30G	1.00	09574																														
ZZZZZZ	VR30H	1.00	09592																														
ZZZZZZ	VR30I	1.00	10005																														
ZZZZZZ	VR30J	1.00	10023																														
ZZZZZZ	VR30K	1.00	10040																														
ZZZZZZ	VR30L	1.00	10054																														
ZZZZZZ	VR36MB1	1.00	10072																														
ZZZZZZ	VR36MB1SPK	1.00	10085																														
ZZZZZZ	VR36A	1.00	10103																														
ZZZZZZ	VR36ADUP	1.00	10121																														
CCV	ACCV11	1.00	10134														X																
CCB	CCB10	1.00	10152														X																
ZZZZZZ	VR36ASPK	1.00	10170																														
ZZZZZZ	VR36B	1.00	10184																														
ZZZZZZ	VR36C	1.00	10202																														
ZZZZZZ	VR36D	1.00	10220																														
ZZZZZZ	VR36E	1.00	10234																														
ZZZZZZ	VR36F	1.00	10251																														
ZZZZZZ	VR36G	1.00	10265																														
ZZZZZZ	VR36H	1.00	10282																														
ZZZZZZ	VR36I	1.00	10300																														
ZZZZZZ	VR36J	1.00	10314																														
CCV	ACCV12	1.00	10331														X																
CCB	CCB11	1.00	10345														X																
ZZZZZZ	VR36K	1.00	10363																														
ZZZZZZ	VR36L	1.00	10381																														
ZZZZZZ	VR35MB1	1.00	10395																														
ZZZZZZ	VR35MB1SPK	1.00	10413																														
ZZZZZZ	VR35A	1.00	10431																														
ZZZZZZ	VR35ADUP	1.00	10444																														
ZZZZZZ	VR35ASPK	1.00	10462																														
ZZZZZZ	VR35B	1.00	10480																														
ZZZZZZ	VR35C	1.00	10493																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR34 | RUNID: HG111701 METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR35D	1.00	10511																														
CCV	ACCV13	1.00	10525														X																
CCB	CCB12	1.00	10543														X																
ZZZZZZ	VR35E	1.00	10561																														
ZZZZZZ	VR35F	1.00	10574																														
ZZZZZZ	VR35G	1.00	10592																														
ZZZZZZ	VR35H	1.00	11010																														
ZZZZZZ	VR35I	1.00	11024																														
ZZZZZZ	VR35J	1.00	11042																														
ZZZZZZ	VR35K	1.00	11060																														
ZZZZZZ	VR35L	1.00	11073																														
CCV	ACCV14	1.00	11091														X																
CCB	CCB13	1.00	11110														X																
ZZZZZZ	VR32MB1	1.00	11130																														
ZZZZZZ	VR32MB1SPK	1.00	11143																														
ZZZZZZ	VR32A	1.00	11161																														
ZZZZZZ	VR32ADUP	1.00	11174																														
ZZZZZZ	VR32ASPK	1.00	11192																														
ZZZZZZ	VR32B	1.00	11210																														
ZZZZZZ	VR32C	1.00	11223																														
ZZZZZZ	VR32D	1.00	11241																														
ZZZZZZ	VR32E	1.00	11255																														
ZZZZZZ	VR32F	1.00	11272																														
CCV	ACCV15	1.00	11290														X																
CCB	CCB14	1.00	11304														X																
ZZZZZZ	VR32G	1.00	11322																														
ZZZZZZ	VR32H	1.00	11340																														
ZZZZZZ	VR32I	1.00	11354																														
ZZZZZZ	VR32J	1.00	11371																														
ZZZZZZ	VR32K	1.00	11385																														
ZZZZZZ	VR32L	1.00	11402																														
ZZZZZZ	VR65MB1	1.00	11420																														
ZZZZZZ	VR65MB1SPK	1.00	11434																														
ZZZZZZ	VR65A	1.00	11451																														
ZZZZZZ	VR65ADUP	1.00	11465																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

INSTRUMENT ID: CETAC MERCURY

START DATE: 11/17/2012

SDG: VR34

RUNID: HG111701

METHOD: CVA

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	ACCV16	1.00	11483														X																
CCB	CCB15	1.00	11501														X																
ZZZZZZ	VR65ASPK	1.00	11515																														
ZZZZZZ	VR65B	1.00	11533																														
ZZZZZZ	VR65C	1.00	11550																														
ZZZZZZ	VR65D	1.00	11564																														
ZZZZZZ	VR65E	1.00	11582																														
ZZZZZZ	VR65F	1.00	11595																														
ZZZZZZ	VR65G	1.00	12013																														
ZZZZZZ	VR65H	1.00	12031																														
ZZZZZZ	VR65I	1.00	12044																														
ZZZZZZ	VR65J	1.00	12062																														
CCV	ACCV17	1.00	12080														X																
CCB	CCB16	1.00	12094														X																
ZZZZZZ	VR65K	1.00	12112																														
ZZZZZZ	VR65L	1.00	12125																														
ZZZZZZ	VR38MB1	1.00	12143																														
ZZZZZZ	VR38MB1SPK	1.00	12161																														
ZZZZZZ	VR38A	1.00	12175																														
ZZZZZZ	VR38ADUP	1.00	12193																														
ZZZZZZ	VR38ASPK	1.00	12211																														
ZZZZZZ	VR38B	1.00	12224																														
ZZZZZZ	VR38C	1.00	12242																														
ZZZZZZ	VR38D	1.00	12255																														
CCV	ACCV18	1.00	12273														X																
CCB	CCB17	1.00	12291														X																
ZZZZZZ	VR38E	1.00	12305																														
ZZZZZZ	VR38F	1.00	12323																														
ZZZZZZ	VR38G	1.00	12341																														
ZZZZZZ	VR38H	1.00	12354																														
ZZZZZZ	VR38I	1.00	12372																														
ZZZZZZ	VR38J	1.00	12390																														
ZZZZZZ	VR38K	1.00	12404																														
CCV	ACCV19	1.00	12422														X																
CCB	CCB18	1.00	12440														X																

FORM XIV

Analysis Run Log

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia

SDG: VR34

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VR33MB1	1.00	12462																														
ZZZZZZ	VR33MB1SPK	1.00	12480																														
ZZZZZZ	VR33A	1.00	12493																														
ZZZZZZ	VR33ADUP	1.00	12511																														
ZZZZZZ	VR33ASPK	1.00	12524																														
ZZZZZZ	VR33B	1.00	12542																														
ZZZZZZ	VR33C	1.00	12555																														
ZZZZZZ	VR33D	1.00	12573																														
ZZZZZZ	VR33E	1.00	12591																														
ZZZZZZ	VR33F	1.00	13005																														
CCV	ACCV20	1.00	13022														X																
CCB	CCB19	1.00	13041														X																
ZZZZZZ	VR33G	1.00	13054																														
ZZZZZZ	VR33H	1.00	13072																														
ZZZZZZ	VR33I	1.00	13090																														
ZZZZZZ	VR33J	1.00	13103																														
ZZZZZZ	VR33K	1.00	13121																														
ZZZZZZ	VR33L	1.00	13134																														
PBW	VR34MB1	1.00	13152														X																
LCSW	VR34MB1SPK	1.00	13170														X																
SA4-6C	VR34A	1.00	13183														X																
SA4-6CD	VR34ADUP	1.00	13201														X																
ZZZZZZ	ACCV21	1.00	13215																														
CCB	CCB20	1.00	13233														X																
SA4-6CS	VR34ASPK	1.00	13251														X																
SA4-7C	VR34B	1.00	13265														X																
SA4-8C	VR34C	1.00	13283														X																
SA4-Field Duplicat	VR34D	1.00	13300														X																
SA5-3C	VR34E	1.00	13314														X																
SA5-4C	VR34F	1.00	13332														X																
SA5-7C	VR34G	1.00	13345														X																
SA5-Field Duplicat	VR34H	1.00	13363														X																
SA6-1C	VR34I	1.00	13380														X																
SA6-2C	VR34J	1.00	13394														X																
CCV	ACCV22	1.00	13412														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Hart Crowser Inc.

PROJECT: Upper Columbia | INSTRUMENT ID: CETAC MERCURY | START DATE: 11/17/2012

SDG: VR34 | RUNID: HG111701 | METHOD: CVA | END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB21	1.00	13430														X																
SA6-3C	VR34K	1.00	13444														X																
SA6-4C	VR34L	1.00	13462														X																
ZZZZZZ	VR31MB1	1.00	13475																														
ZZZZZZ	VR31MB1SPK	1.00	13493																														
ZZZZZZ	VR31A	1.00	13511																														
ZZZZZZ	VR31ADUP	1.00	13525																														
ZZZZZZ	VR31ASPK	1.00	13543																														
ZZZZZZ	VR31B	1.00	13560																														
ZZZZZZ	VR31C	1.00	13574																														
ZZZZZZ	VR31D	1.00	13592																														
CCV	ACCV23	1.00	14005														X																
CCB	CCB22	1.00	14023														X																

VR34 : 99051

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: VR34

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-6C
ARI ID: 12-22213 VR34A

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.77
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.60
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.188	12.2

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA4-7C
ARI ID: 12-22214 VR34B

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.90
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.80
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	4.90

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/01/12
Date Received: 11/07/12

Client ID: SA4-8C
ARI ID: 12-22215 VR34C

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.63
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.20
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	5.14

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA4-Field Duplicate
ARI ID: 12-22216 VR34D

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.80
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.70
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.196	10.2

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/03/12
Date Received: 11/07/12

Client ID: SA5-3C
ARI ID: 12-22217 VR34E

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.79
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.40
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	3.59

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA5-4C
ARI ID: 12-22218 VR34F

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.12
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	96.40
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	4.69

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA5-7C
ARI ID: 12-22219 VR34G

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.19
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.60
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	5.54

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA5-Field Duplicate
ARI ID: 12-22220 VR34H

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.16
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.20
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	5.46

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA6-1C
ARI ID: 12-22221 VR34I

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	5.91
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.50
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	6.74

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA6-2C
ARI ID: 12-22222 VR34J

Analyte	Date	Method	Units	RL	Sample
pH	11/15/12 111512#1	SW9045	std units	0.01	6.09
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.60
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	3.92

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Client ID: SA6-3C
ARI ID: 12-22223 VR34K

Analyte	Date	Method	Units	RL	Sample
pH	11/16/12 111612#1	SW9045	std units	0.01	5.46
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	97.40
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.020	8.08

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

SAMPLE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/03/12
Date Received: 11/07/12

Client ID: SA6-4C
ARI ID: 12-22224 VR34L

Analyte	Date	Method	Units	RL	Sample
pH	11/16/12 111612#1	SW9045	std units	0.01	5.53
Total Solids	11/13/12 111312#1	SM2540B	Percent	0.01	99.60
Total Organic Carbon	11/26/12 112612#1	Plumb,1981	Percent	0.194	4.84

RL Analytical reporting limit
U Undetected at reported detection limit

pH determined on 1:1 soil:D.I. water extracts.

REPLICATE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: 11/02/12
Date Received: 11/07/12

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR34G Client ID: SA5-7C					
pH	11/15/12	std units	6.19	6.26	0.07

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH	ICVL	11/15/12	std units	6.97	7.00	0.03
SW9045	ICVL	11/16/12		6.96	7.00	0.04
Total Organic Carbon Plumb,1981	ICVL	11/26/12	Percent	0.096	0.100	96.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/13/12	Percent	< 0.01 U
Total Organic Carbon	11/26/12	Percent	< 0.020 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR34-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 11/27/12

Project: Upper Columbia
Event: 17800-36
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	11/26/12	Percent	3.06	2.99	102.3%

Total Solids

ARI Job ID: VR34

Solids Data Entry Report Checked by: NB Date: 11/16/12
Date: 11/16/12 Data Analyst: DM

Solids Determination performed on 11/15/12 by DM

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
VR34	A	SA4-6C	1.033	10.415	10.075	96.38
VR34	B	SA4-6C	1.028	10.410	10.075	96.43
VR34	C	SA4-6C	0.981	10.637	10.360	97.13
VR34	D	SA4-6C	0.994	10.010	9.749	97.11
VR34	E	SA4-6C	0.978	10.086	9.751	96.32
VR34	F	SA4-6C	0.999	10.402	10.035	96.10
VR34	G	SA4-6C	0.981	10.346	10.103	97.41
VR34	H	SA4-6C	1.007	10.600	10.295	96.82
VR34	I	SA4-6C	1.013	10.791	10.494	96.96
VR34	J	SA4-6C	1.032	10.411	10.149	97.21
VR34	K	SA4-6C	0.988	10.391	10.094	96.84
VR34	L	SA4-6C	0.992	10.495	10.436	99.38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section: Mtals

Oven Identification: 07 Balance ID: 068755

Samples in Oven: Date: 11-15-12 Time: 1013 Temp: 102°C Analyst: DM

Removed from Oven: Date: 11-16-12 Time: 0713 Temp: 103°C Analyst: DM

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
VR34	A	1.033	10.415	10.075	—	✓
"	B	1.028	10.410	10.075	—	✓
"	C	0.981	10.637	10.360	—	✓
"	D	0.994	10.010	9.749	—	✓
"	E	0.978	10.086	9.751	—	✓
"	F	0.999	10.402	10.035	—	✓
"	G	0.981	10.346	10.103	—	✓
"	H	1.007	10.600	10.295	—	✓
"	I	1.013	10.791	10.494	—	✓
"	J	1.032	10.411	10.149	—	✓
"	K	0.988	10.391	10.094	—	✓
"	L	0.992	10.495	10.436	—	✓
			11-15-12	DM		

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VR34

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM **Final Volume** 50 **Sample ID** VR34 PESPK, MBSPK

Date: 11-15-12 **Final Volume (Hg):** 50

		Prepcode:	SWC		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	2977-9		
		Vol Added (mL):	1.0		
	Ag		50		2.0
S	Al		200 ✓	200	
T	As		200		10
O	Ba		200	200	
C	Be		50	50	
K	Ca		1000 ✓	1000	
	Cd		50		2.0
	Co		50	50	
C	Cr		50	50	
O	Cu		50	50	
N	Fe		200 ✓	200	
C	K		1000 ✓	1000	
E	Mg		1000 ✓	1000	
N	Mn		50	50	
T	Na		1000 ✓	1000	
R	Ni		50	50	
A	Pb		200		10
T	Se		200		10
I	Sr		50	50	
O	Tl		200		10
N	V		50	50	
	Zn		50	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	2957-2	2956-7	
	1.0	1.0	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25 ✓		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25 ✓		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25 ✓		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25 ✓		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SnM	CVA	1.0	0.05	2908-7
Hg MBSPK	↓	CVA	1.0	0.1	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 11-15-12 Time: 1025

Matrix: Soil Block ID: #2 Block Temp: 92°C Thermometer: MP30

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
VR34 A	1	—	1.005	50.0	1.011	50.0	
" ADUP	1	—	1.004		1.016		
" APSK	1	—	1.007		1.007		
" B	1	—	1.054		1.042		
" C	1	—	1.088		1.017		
" D	1	—	1.058		1.024		
" E	1	—	1.048		1.032		
" F	1	—	1.042		1.009		
" G	1	—	1.048		1.035		
" H	1	—	1.051		1.076		
" I	1	—	1.016		1.004		
" J	1	—	1.073		1.043		
" K	1	—	1.019		1.030		
" L	1	—	1.016		1.042		
" MB1	—	—	—		—		
" MB1SPK	—	—	—	50.0	—	50.0	
				11-15-12 DM			

Chemical/Reagent ID:

HNO_3: MP2SOP\I7833 HCl: I7676 H_2O_2: I7845 Tube Lot #: 1207143

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm | Matrix: Soil
Analyst: DM | Date: 11-15-12
Bath Temp: 95°C | Start Time: 1037 | End Time: 1107

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VR34 A	1	—	0.738	50.0	11/16 1	Y	
" ADUP	1	—	0.741		1		
" ASPK	1	—	0.734		1		
" B	1	—	0.740		1		
" C	1	—	0.739		1		
" D	1	—	0.721		1		
" E	1	—	0.717		1		
" F	1	—	0.735		1		
" G	1	—	0.732		1		
" H	1	—	0.750		1		
" I	1	—	0.713		1		
" J	1	—	0.728		1		
" K	1	—	0.710		1		
" L	1	—	0.714		1		
" MB1	—	—	—	↓	1	↓	
" MBSPK	—	—	—	50.0	1	Y	
				11-15-12 DM			

Chemical/Reagent ID:

HNO_3: I7833 | H_2SO_4: I7677 | HCl: —
5% $K_2S_2O_8$: MP2375 | 5% $KMnO_4$: MP2576 | Digest Tube Lot: 1205258

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	VR34
Unacceptable Blank:	☐	Date of Event:	11.15.12
Unacceptable Duplicate:	☐	Client ID:	Hart Crowser, Inc.
Unacceptable Spike:	✓	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

A: 0.286 ppb Sb
ASPK: 1.235 ppb Sb %R = 3.8

post spike ok

(100x) A-L : 1.978 ppb Cd
(20x) A : 8.939 ppb Cd 10.6% difference

Samples Affected:

Corrective Action Taken:

Semb
11/19/12

Analyst Initials: MJJ **Supervisor:**

Date: 11.16.12 **Date:**

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VR34

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 11-12-12 Analysis Date: 11-16-12 Analyst: BA

LR Date: 7-30-12 Page: 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2992-3
		2			2991-4 Insufficient volume
		3			2991-5
		4			-6
		5			-7
		2			-4
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		VR30 B	SWC	5	
		D			
		E			
		F			
		G			
		H			
		CCV2			
		CCB2			
		VR32 A-L	SWC	25 ✓	
		A		5	
		ADUP		✓	

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 2 of 6

All corrections made by analyst unless otherwise noted. BA 11-16-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR32 ASPK	SWC	5	Al Ba Fe Mn STL
		#11-29 APOST			0.08 mL ICP Spike 2977-9
		L			
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End VR30, 32
	✓	VR34 MBI	SWC	2	
	✓	B		5	
	✓	C			
	✓	D			
	✓	~~AL~~		25	
	✓	A		5	
	✓	ADUP			
	✓	~~ASPK~~			
	✓	~~APOST~~			0.08 mL ICP Spike 2977-9
	✓	MBISPK		2	
		CCV5			Be, Co, Fe, Mg, Na, Si ↑
		CCB5			~25 min delay
		CCV6			
		CCB6			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 3 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR34 E	SWC	5	
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV7			
		CCB7			½ hr delay
		CCV8			
		CCB8			
		VR34 MB1	SWC	2	
		B		5	
		C			
		D			
		A-L		25 ✓	
		A		5	
		ADUP		✓	
		ASPK		✓	Al, Fe, Mn STL Cal
		APOST		✓ (0.198 mL Std Spike 29177-9)	Ca OK (C.A.F)
		MB1SPK		2 ✓	
		CCV9			
		CCB9			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 4 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR33 MB1	SWC	2	
		B		5	
		C		↓	
		D		↓	
		A-L		25 ✓	
		A		5	
		ADUP		✓	
		ASPK		✓	Al Fe Mn STL Mg↑
		APOST		✓ (0.05 mL ICP Spike 2977.9) ↓	Mg↑ (C.AF.)
		MBISPK		2 ✓	
		CCV10			Al, Ba, Cd, Ca, Cr, Cu, Fe, Mg, Mn, Mo, ^{330}Ag, Pb, Sb, Si, Sr, Ti, V, Zn ↑ (A.N.)
		CCB10			
		CCV11			
		CCB11			
		VR33 E	SWC	5	
		F		↓	
		G		↓	
		H		↓	
		I		↓	
		J		↓	
		K		↓	
		L		↓	
		CCV12			
		CCB12			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 11-16-12 Analyst: BA

LR Date: — Page: 5 of 6

All corrections made by analyst unless otherwise noted. BA 11-19-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CRI			
		ICSA			
		ICSAB			
		CCV13			
		CCB13			End VR34, VR33
		VR36 MB1	SWC	2	Mn > RL (0.00115 mg/L) - AiN.
		B		5	
		C		↓	
		D		↓	
		A-L		25 ✓	
		A		5	
		ADUP		↓ ✓	
		ASPK		↓ ✓	Al, Fe STI
		~~ZZZZZZ~~ ~~APOST~~		↓ ✓	↓ (0.05 mL ICP Spike 2577-9)
		MB1SPK	↓	2 ✓	
		CCV14			
		CCB14			
	✓	VR36 E	SWC	5	Failing CCV
	✓	F	↓	↓	
	✓	G			
	✓	H			
	✓	I			
	✓	J			
	✓	K			

11/26/12

VR34 : 00122

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA Analysis Date: 11-16-12

ICP - 2	Analyst BA 11-20-12	Peer HK 11-20	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See log
Internal Standards	✓	✓	
Carry-over	—	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See log - VR34, VR33
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	See log - VR36
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	~~CAF=VR34, VR33~~ A.N.-VR33, VR36

Analysis Begun

Start Time: 11/16/2012 8:40:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 11/16/2012 8:40:14 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2257192.3	5062.38	0.22%	100.0	%
ScR 361.383	285929.2	1391.38	0.49%	100.0	%
Ag 328.068†	-156.2	13.31	8.52%	[0.00]	mg/L
Al 308.215†	147.1	12.17	8.28%	[0.00]	mg/L
As 188.979†	-9.5	1.63	17.14%	[0.00]	mg/L
B 249.677†	40.2	10.66	26.54%	[0.00]	mg/L
Ba 233.527†	19.9	6.07	30.52%	[0.00]	mg/L
Be 313.042†	905.1	35.52	3.92%	[0.00]	mg/L
Ca 317.933†	161.6	10.52	6.51%	[0.00]	mg/L
Cd 228.802†	303.7	1.47	0.48%	[0.00]	mg/L
Co 228.616†	-63.9	0.59	0.92%	[0.00]	mg/L
Cr 267.716†	-81.8	5.34	6.52%	[0.00]	mg/L
Cu 324.752†	2486.2	26.59	1.07%	[0.00]	mg/L
Fe 273.955†	14.2	2.43	17.08%	[0.00]	mg/L
K 766.490†	498.6	23.15	4.64%	[0.00]	mg/L
Mg 279.077†	83.4	7.46	8.95%	[0.00]	mg/L
Mn 257.610†	157.9	1.11	0.71%	[0.00]	mg/L
Mo 202.031†	66.0	0.64	0.97%	[0.00]	mg/L
Na 589.592†	-326.9	3.37	1.03%	[0.00]	mg/L
Na 330.237†	-205.1	3.78	1.84%	[0.00]	mg/L
Ni 231.604†	-23.4	4.31	18.37%	[0.00]	mg/L
Pb 220.353†	62.2	0.92	1.47%	[0.00]	mg/L
Sb 206.836†	64.7	1.51	2.33%	[0.00]	mg/L
Se 196.026†	-53.9	5.80	10.77%	[0.00]	mg/L
Si 288.158†	61.1	6.41	10.48%	[0.00]	mg/L
Sn 189.927†	0.6	3.59	648.11%	[0.00]	mg/L
Sr 421.552†	398.0	32.76	8.23%	[0.00]	mg/L
Ti 334.903†	-53.4	5.15	9.65%	[0.00]	mg/L
Tl 190.801†	-42.6	0.94	2.21%	[0.00]	mg/L
V 292.402†	180.2	30.85	17.12%	[0.00]	mg/L
Zn 206.200†	26.6	1.80	6.77%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 11/16/2012 8:44:35 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	5162065.8	309107.01	5.99%	228.7	%
ScR 361.383	753266.5	90956.28	12.07%	263.4	%
Ba 233.527†	1874.1	1447.51	77.24%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cd 228.802†	33927.3	6109.66	18.01%	[10]	mg/L
Co 228.616†	36364.7	6783.73	18.65%	[10]	mg/L
Cr 267.716†	2462.0	1761.76	71.56%	[10]	mg/L
Saturated within auto integration window (code 4)					
Cu 324.752†	249596.2	35377.75	14.17%	[10]	mg/L
Saturated within auto integration window (code 4)					
Mn 257.610†	3225.8	1401.70	43.45%	[10]	mg/L
Saturated within auto integration window (code 4)					
V 292.402†	138697.0	25356.30	18.28%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 11/16/2012 8:47:36 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2240434.6	11749.05	0.52%	99.26	%
ScR 361.383	278574.0	2167.99	0.78%	97.43	%
Ag 328.068†	176715.6	981.09	0.56%	[1.0]	mg/L
As 188.979†	18889.0	102.99	0.55%	[10]	mg/L
B 249.677†	78359.9	959.17	1.22%	[10]	mg/L
Be 313.042†	3325157.8	9039.91	0.27%	[5.0]	mg/L
Na 589.592†	637056.8	3225.78	0.51%	[50]	mg/L
Ni 231.604†	41213.5	479.43	1.16%	[10]	mg/L
Pb 220.353†	80014.5	352.48	0.44%	[10]	mg/L
Se 196.026†	14888.7	66.03	0.44%	[10]	mg/L
Sr 421.552†	4683748.6	13846.00	0.30%	[5]	mg/L
Tl 190.801†	25566.5	125.79	0.49%	[10]	mg/L
Zn 206.200†	40539.2	432.89	1.07%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 11/16/2012 8:50:10 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2284080.4	20514.72	0.90%	101.2	%
ScR 361.383	287209.0	4271.56	1.49%	100.4	%
Mo 202.031†	200666.8	1788.12	0.89%	[10]	mg/L
Sb 206.836†	32698.0	176.84	0.54%	[10]	mg/L
Si 288.158†	21523.3	356.61	1.66%	[10]	mg/L
Sn 189.927†	38978.7	378.05	0.97%	[10]	mg/L
Ti 334.903†	208410.1	4234.27	2.03%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/16/2012 8:52:25 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2129515.1	15926.23	0.75%	94.34	%
ScR 361.383	283261.8	4479.15	1.58%	99.07	%
Al 308.215†	53425.5	1062.08	1.99%	[30]	mg/L
Ca 317.933†	426118.0	3161.77	0.74%	[30]	mg/L
Fe 273.955†	131112.8	857.59	0.65%	[100]	mg/L
K 766.490†	199317.4	2014.88	1.01%	[100]	mg/L
Mg 279.077†	44239.4	880.98	1.99%	[30]	mg/L
Na 330.237†	2873.6	54.15	1.88%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	176700	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1781	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1889	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7836	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	187.4	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	665000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14200	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	3393	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	3636	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	246.2	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	24960	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1311	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1993	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1475	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	322.6	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20070	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12740	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.74	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4121	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8001	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3270	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1489	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2152	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3898	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	936700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	20840	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2557	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	13870	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4054	0.00000	1.000000	

Analysis Begun

Start Time: 11/16/2012 9:03:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: STD2
Date Collected: 11/16/2012 9:03:34 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2234101.3	25048.88	1.12%	98.98	%
ScR 361.383	281040.0	8376.44	2.98%	98.29	%
Ba 233.527†	45364.6	2015.40	4.44%	[10]	mg/L
Cd 228.802†	316786.9	4140.20	1.31%	[10]	mg/L
Co 228.616†	352595.3	5111.49	1.45%	[10]	mg/L
Cr 267.716†	62110.4	2667.07	4.29%	[10]	mg/L
Cu 324.752†	2600465.7	38628.72	1.49%	[10]	mg/L
Mn 257.610†	361794.3	15460.11	4.27%	[10]	mg/L
V 292.402†	1309618.0	17838.14	1.36%	[10]	mg/L

==========

Analysis Begun

Start Time: 11/16/2012 9:05:19 AM **Plasma On Time: 11/16/2012 7:13:09 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\CRISET1.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: ICV **Date Collected: 11/16/2012 9:05:20 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2209684.8	97.90	%	0.341				0.35%
ScR 361.383	282108.1	98.66	%	1.030				1.04%
Ag 328.068†	171195.3	0.9690	mg/L	0.00334	0.9690	mg/L	0.00334	0.34%
Al 308.215†	3611.7	1.994	mg/L	0.0285	1.994	mg/L	0.0285	1.43%
As 188.979†	3613.4	1.937	mg/L	0.0091	1.937	mg/L	0.0091	0.47%
B 249.677†	7493.5	0.9554	mg/L	0.00947	0.9554	mg/L	0.00947	0.99%
Ba 233.527†	4623.1	1.019	mg/L	0.0129	1.019	mg/L	0.0129	1.27%
Be 313.042†	622301.4	0.9355	mg/L	0.01462	0.9355	mg/L	0.01462	1.56%
Ca 317.933†	27114.7	1.909	mg/L	0.0255	1.909	mg/L	0.0255	1.34%
Cd 228.802†	32872.5	1.026	mg/L	0.0051	1.026	mg/L	0.0051	0.50%
Co 228.616†	36272.9	1.027	mg/L	0.0044	1.027	mg/L	0.0044	0.43%
Cr 267.716†	6298.6	1.014	mg/L	0.0094	1.014	mg/L	0.0094	0.93%
Cu 324.752†	260661.1	1.002	mg/L	0.0035	1.002	mg/L	0.0035	0.35%
Fe 273.955†	2632.3	2.001	mg/L	0.0211	2.001	mg/L	0.0211	1.06%
K 766.490†	39267.6	19.70	mg/L	0.308	19.70	mg/L	0.308	1.56%
Mg 279.077†	2926.1	1.992	mg/L	0.0206	1.992	mg/L	0.0206	1.04%
Mn 257.610†	35565.1	0.9834	mg/L	0.01313	0.9834	mg/L	0.01313	1.33%
Mo 202.031†	20424.2	1.018	mg/L	0.0045	1.018	mg/L	0.0045	0.44%
Na 589.592†	619490.6	48.62	mg/L	0.591	48.62	mg/L	0.591	1.22%
Na 330.237†	1485.5	51.60	mg/L	0.574	51.60	mg/L	0.574	1.11%
Ni 231.604†	3941.7	0.9567	mg/L	0.00964	0.9567	mg/L	0.00964	1.01%
Pb 220.353†	15806.7	1.977	mg/L	0.0055	1.977	mg/L	0.0055	0.28%
Sb 206.836†	6859.5	2.097	mg/L	0.0069	2.097	mg/L	0.0069	0.33%
Se 196.026†	2843.4	1.909	mg/L	0.0148	1.909	mg/L	0.0148	0.77%
Si 288.158†	4441.4	2.063	mg/L	0.0250	2.063	mg/L	0.0250	1.21%
Sn 189.927†	3882.0	0.9973	mg/L	0.00242	0.9973	mg/L	0.00242	0.24%
Sr 421.552†	889172.4	0.9492	mg/L	0.01240	0.9492	mg/L	0.01240	1.31%
Ti 334.903†	20989.1	1.006	mg/L	0.0138	1.006	mg/L	0.0138	1.37%
Tl 190.801†	4946.7	1.927	mg/L	0.0082	1.927	mg/L	0.0082	0.42%
V 292.402†	130561.3	1.001	mg/L	0.0042	1.001	mg/L	0.0042	0.42%
Zn 206.200†	3966.6	0.9782	mg/L	0.01019	0.9782	mg/L	0.01019	1.04%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 11/16/2012 9:09:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2196753.1	97.32	%	0.645				0.66%
ScR 361.383	277079.3	96.90	%	0.596				0.62%
Ag 328.068†	25.3	0.00014	mg/L	0.000119	0.00014	mg/L	0.000119	83.25%
Al 308.215†	11.8	0.00663	mg/L	0.004874	0.00663	mg/L	0.004874	73.52%
As 188.979†	-2.4	-0.00130	mg/L	0.000877	-0.00130	mg/L	0.000877	67.73%
B 249.677†	20.4	0.00260	mg/L	0.000693	0.00260	mg/L	0.000693	26.66%
Ba 233.527†	-1.6	-0.00036	mg/L	0.000345	-0.00036	mg/L	0.000345	96.09%
Be 313.042†	140.9	0.00021	mg/L	0.000063	0.00021	mg/L	0.000063	29.60%
Ca 317.933†	4.1	0.00029	mg/L	0.000613	0.00029	mg/L	0.000613	209.76%
Cd 228.802†	-4.1	-0.00012	mg/L	0.000133	-0.00012	mg/L	0.000133	109.62%
Co 228.616†	-13.1	-0.00037	mg/L	0.000080	-0.00037	mg/L	0.000080	21.59%
Cr 267.716†	-1.9	-0.00030	mg/L	0.000789	-0.00030	mg/L	0.000789	263.58%
Cu 324.752†	73.5	0.00028	mg/L	0.000129	0.00028	mg/L	0.000129	45.76%
Fe 273.955†	2.6	0.00199	mg/L	0.000852	0.00199	mg/L	0.000852	42.89%
K 766.490†	40.7	0.02043	mg/L	0.010112	0.02043	mg/L	0.010112	49.51%
Mg 279.077†	6.7	0.00456	mg/L	0.002283	0.00456	mg/L	0.002283	50.03%
Mn 257.610†	0.2	0.00001	mg/L	0.000163	0.00001	mg/L	0.000163	>999.9%
Mo 202.031†	20.7	0.00103	mg/L	0.000105	0.00103	mg/L	0.000105	10.18%
Na 589.592†	146.5	0.01150	mg/L	0.003439	0.01150	mg/L	0.003439	29.92%
Na 330.237†	-7.5	-0.2613	mg/L	0.47250	-0.2613	mg/L	0.47250	180.80%
Ni 231.604†	-8.7	-0.00212	mg/L	0.001223	-0.00212	mg/L	0.001223	57.68%
Pb 220.353†	3.0	0.00037	mg/L	0.000277	0.00037	mg/L	0.000277	75.11%
Sb 206.836†	7.4	0.00227	mg/L	0.001134	0.00227	mg/L	0.001134	49.84%
Se 196.026†	7.0	0.00472	mg/L	0.002402	0.00472	mg/L	0.002402	50.90%
Si 288.158†	3.5	0.00165	mg/L	0.002627	0.00165	mg/L	0.002627	159.46%
Sn 189.927†	-2.5	-0.00063	mg/L	0.000777	-0.00063	mg/L	0.000777	123.08%
Sr 421.552†	134.3	0.00014	mg/L	0.000071	0.00014	mg/L	0.000071	49.43%
Ti 334.903†	-3.6	-0.00017	mg/L	0.000923	-0.00017	mg/L	0.000923	527.60%
Tl 190.801†	-0.9	-0.00037	mg/L	0.001500	-0.00037	mg/L	0.001500	408.38%
V 292.402†	-13.9	-0.00011	mg/L	0.000253	-0.00011	mg/L	0.000253	236.98%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000096	-0.00012	mg/L	0.000096	80.81%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 9:13:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2216218.3	98.18	%	0.984				1.00%
ScR 361.383	282613.9	98.84	%	1.028				1.04%
Ag 328.068†	537.3	0.00304	mg/L	0.000179	0.00304	mg/L	0.000179	5.90%
Al 308.215†	108.1	0.06056	mg/L	0.008648	0.06056	mg/L	0.008648	14.28%
As 188.979†	87.4	0.04638	mg/L	0.000615	0.04638	mg/L	0.000615	1.33%
B 249.677†	161.3	0.02058	mg/L	0.000219	0.02058	mg/L	0.000219	1.07%
Ba 233.527†	10.4	0.00228	mg/L	0.001457	0.00228	mg/L	0.001457	64.02%
Be 313.042†	676.8	0.00102	mg/L	0.000033	0.00102	mg/L	0.000033	3.26%
Ca 317.933†	680.4	0.04791	mg/L	0.000586	0.04791	mg/L	0.000586	1.22%
Cd 228.802†	68.8	0.00187	mg/L	0.000023	0.00187	mg/L	0.000023	1.24%
Co 228.616†	104.8	0.00296	mg/L	0.000186	0.00296	mg/L	0.000186	6.27%
Cr 267.716†	27.8	0.00447	mg/L	0.000689	0.00447	mg/L	0.000689	15.42%
Cu 324.752†	541.8	0.00208	mg/L	0.000042	0.00208	mg/L	0.000042	2.04%
Fe 273.955†	70.8	0.05399	mg/L	0.001502	0.05399	mg/L	0.001502	2.78%
K 766.490†	998.9	0.5011	mg/L	0.00548	0.5011	mg/L	0.00548	1.09%
Mg 279.077†	80.8	0.05479	mg/L	0.002742	0.05479	mg/L	0.002742	5.00%
Mn 257.610†	31.1	0.00086	mg/L	0.000036	0.00086	mg/L	0.000036	4.23%
Mo 202.031†	104.7	0.00522	mg/L	0.000094	0.00522	mg/L	0.000094	1.80%
Na 589.592†	6003.1	0.4712	mg/L	0.00187	0.4712	mg/L	0.00187	0.40%
Na 330.237†	7.0	0.2434	mg/L	0.08368	0.2434	mg/L	0.08368	34.38%
Ni 231.604†	38.7	0.00941	mg/L	0.000812	0.00941	mg/L	0.000812	8.63%
Pb 220.353†	159.1	0.01990	mg/L	0.000201	0.01990	mg/L	0.000201	1.01%
Sb 206.836†	174.7	0.05345	mg/L	0.001079	0.05345	mg/L	0.001079	2.02%
Se 196.026†	76.9	0.05167	mg/L	0.002389	0.05167	mg/L	0.002389	4.62%
Si 288.158†	139.0	0.06454	mg/L	0.003275	0.06454	mg/L	0.003275	5.07%
Sn 189.927†	32.9	0.00847	mg/L	0.001308	0.00847	mg/L	0.001308	15.43%
Sr 421.552†	944.7	0.00101	mg/L	0.000032	0.00101	mg/L	0.000032	3.17%
Ti 334.903†	115.1	0.00551	mg/L	0.000574	0.00551	mg/L	0.000574	10.41%
Tl 190.801†	123.3	0.04819	mg/L	0.000503	0.04819	mg/L	0.000503	1.04%
V 292.402†	377.1	0.00290	mg/L	0.000117	0.00290	mg/L	0.000117	4.03%
Zn 206.200†	37.8	0.00931	mg/L	0.000286	0.00931	mg/L	0.000286	3.07%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 9:17:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190631.7	97.05	%	0.522				0.54%
ScR 361.383	272122.2	95.17	%	0.790				0.83%
Ag 328.068†	-126.8	-0.00071	mg/L	0.000216	-0.00071	mg/L	0.000216	30.24%
Al 308.215†	354369.7	199.0	mg/L	1.93	199.0	mg/L	1.93	0.97%
As 188.979†	37.4	0.01434	mg/L	0.004842	0.01434	mg/L	0.004842	33.76%
B 249.677†	-4.5	-0.00057	mg/L	0.001157	-0.00057	mg/L	0.001157	201.74%
Ba 233.527†	134.4	-0.00180	mg/L	0.001640	-0.00180	mg/L	0.001640	91.02%
Be 313.042†	120.9	0.00018	mg/L	0.000016	0.00018	mg/L	0.000016	8.99%
Ca 317.933†	1386218.1	97.59	mg/L	1.338	97.59	mg/L	1.338	1.37%
Cd 228.802†	52.6	-0.00030	mg/L	0.000127	-0.00030	mg/L	0.000127	42.56%
Co 228.616†	59.7	-0.00082	mg/L	0.000211	-0.00082	mg/L	0.000211	25.75%
Cr 267.716†	-0.1	-0.00223	mg/L	0.000855	-0.00223	mg/L	0.000855	38.27%
Cu 324.752†	-2019.9	-0.00015	mg/L	0.000123	-0.00015	mg/L	0.000123	83.50%
Fe 273.955†	251658.1	191.9	mg/L	1.82	191.9	mg/L	1.82	0.95%
K 766.490†	15.3	0.00769	mg/L	0.016333	0.00769	mg/L	0.016333	212.48%
Mg 279.077†	151274.0	102.5	mg/L	1.20	102.5	mg/L	1.20	1.17%
Mn 257.610†	20.7	0.00051	mg/L	0.000176	0.00051	mg/L	0.000176	34.16%
Mo 202.031†	46.0	0.00124	mg/L	0.000303	0.00124	mg/L	0.000303	24.42%
Na 589.592†	208.1	0.01633	mg/L	0.001390	0.01633	mg/L	0.001390	8.51%
Na 330.237†	-19.8	-0.6882	mg/L	0.05443	-0.6882	mg/L	0.05443	7.91%
Ni 231.604†	0.5	0.00013	mg/L	0.001338	0.00013	mg/L	0.001338	>999.9%
Pb 220.353†	-300.5	0.00217	mg/L	0.000584	0.00217	mg/L	0.000584	26.90%
Sb 206.836†	25.7	0.00772	mg/L	0.005252	0.00772	mg/L	0.005252	68.05%
Se 196.026†	25.1	0.01686	mg/L	0.002317	0.01686	mg/L	0.002317	13.74%
Si 288.158†	-30.2	-0.00162	mg/L	0.003162	-0.00162	mg/L	0.003162	195.03%
Sn 189.927†	-76.8	-0.00764	mg/L	0.001565	-0.00764	mg/L	0.001565	20.49%
Sr 421.552†	3622.8	0.00387	mg/L Conf.	0.000024	0.00387	mg/L	0.000024	0.61%
Ti 334.903†	152.9	0.00268	mg/L	0.000157	0.00268	mg/L	0.000157	5.86%
Tl 190.801†	-53.8	-0.00056	mg/L	0.002577	-0.00056	mg/L	0.002577	462.75%
V 292.402†	1360.9	0.00368	mg/L	0.000137	0.00368	mg/L	0.000137	3.73%
Zn 206.200†	16.8	0.00414	mg/L	0.000676	0.00414	mg/L	0.000676	16.33%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 9:22:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2190888.4	97.06	%	0.945				0.97%
ScR 361.383	280553.1	98.12	%	1.630				1.66%
Ag 328.068†	174109.6	0.9855	mg/L	0.01251	0.9855	mg/L	0.01251	1.27%
Al 308.215†	345774.5	194.1	mg/L	3.64	194.1	mg/L	3.64	1.87%
As 188.979†	1856.0	0.9764	mg/L	0.00758	0.9764	mg/L	0.00758	0.78%
B 249.677†	4.4	-0.00148	mg/L	0.000384	-0.00148	mg/L	0.000384	25.84%
Ba 233.527†	4703.1	1.005	mg/L	0.0174	1.005	mg/L	0.0174	1.73%
Be 313.042†	621412.9	0.9342	mg/L	0.01515	0.9342	mg/L	0.01515	1.62%
Ca 317.933†	1384278.5	97.46	mg/L	1.849	97.46	mg/L	1.849	1.90%
Cd 228.802†	32640.6	1.023	mg/L	0.0103	1.023	mg/L	0.0103	1.01%
Co 228.616†	35083.8	0.9923	mg/L	0.00677	0.9923	mg/L	0.00677	0.68%
Cr 267.716†	6250.0	1.004	mg/L	0.0188	1.004	mg/L	0.0188	1.87%
Cu 324.752†	264088.7	1.023	mg/L	0.0118	1.023	mg/L	0.0118	1.15%
Fe 273.955†	250591.4	191.1	mg/L	3.79	191.1	mg/L	3.79	1.98%
K 766.490†	-57.9	-0.02907	mg/L	0.026894	-0.02907	mg/L	0.026894	92.50%
Mg 279.077†	144004.0	97.55	mg/L	1.854	97.55	mg/L	1.854	1.90%
Mn 257.610†	34625.5	0.9572	mg/L	0.01844	0.9572	mg/L	0.01844	1.93%
Mo 202.031†	39.2	0.00085	mg/L	0.000259	0.00085	mg/L	0.000259	30.55%
Na 589.592†	393.4	0.03087	mg/L	0.003439	0.03087	mg/L	0.003439	11.14%
Na 330.237†	-6.8	-0.5377	mg/L	0.12445	-0.5377	mg/L	0.12445	23.14%
Ni 231.604†	3861.8	0.9372	mg/L	0.01594	0.9372	mg/L	0.01594	1.70%
Pb 220.353†	7369.5	0.9602	mg/L	0.00787	0.9602	mg/L	0.00787	0.82%
Sb 206.836†	3346.2	1.013	mg/L	0.0073	1.013	mg/L	0.0073	0.72%
Se 196.026†	1441.3	0.9670	mg/L	0.00596	0.9670	mg/L	0.00596	0.62%
Si 288.158†	-35.4	-0.00092	mg/L	0.002202	-0.00092	mg/L	0.002202	238.98%
Sn 189.927†	-78.2	-0.00752	mg/L	0.001086	-0.00752	mg/L	0.001086	14.44%
Sr 421.552†	3451.0	0.00368	mg/L Conf.	0.000068	0.00368	mg/L	0.000068	1.83%
Ti 334.903†	142.2	0.00197	mg/L	0.000354	0.00197	mg/L	0.000354	17.98%
Tl 190.801†	2300.9	0.9111	mg/L	0.00358	0.9111	mg/L	0.00358	0.39%
V 292.402†	128370.6	0.9780	mg/L	0.01111	0.9780	mg/L	0.01111	1.14%
Zn 206.200†	3708.3	0.9147	mg/L	0.01559	0.9147	mg/L	0.01559	1.70%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 11/16/2012 9:26:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2252340.2	99.79	%	1.267				1.27%
ScR 361.383	280210.0	98.00	%	0.128				0.13%
Ag 328.068†	170394.8	0.9645	mg/L	0.01031	0.9645	mg/L	0.01031	1.07%
Al 308.215†	3796.5	2.098	mg/L	0.0465	2.098	mg/L	0.0465	2.22%
As 188.979†	3624.7	1.943	mg/L	0.0245	1.943	mg/L	0.0245	1.26%
B 249.677†	7600.7	0.9691	mg/L	0.00834	0.9691	mg/L	0.00834	0.86%
Ba 233.527†	4724.9	1.041	mg/L	0.0114	1.041	mg/L	0.0114	1.10%
Be 313.042†	624775.5	0.9393	mg/L	0.00408	0.9393	mg/L	0.00408	0.43%
Ca 317.933†	28107.5	1.979	mg/L	0.0536	1.979	mg/L	0.0536	2.71%
Cd 228.802†	32740.0	1.021	mg/L	0.0096	1.021	mg/L	0.0096	0.94%
Co 228.616†	36281.5	1.027	mg/L	0.0131	1.027	mg/L	0.0131	1.27%
Cr 267.716†	6427.3	1.034	mg/L	0.0105	1.034	mg/L	0.0105	1.01%
Cu 324.752†	257751.3	0.9908	mg/L	0.00855	0.9908	mg/L	0.00855	0.86%
Fe 273.955†	2794.7	2.125	mg/L	0.0446	2.125	mg/L	0.0446	2.10%
K 766.490†	39353.6	19.74	mg/L	0.168	19.74	mg/L	0.168	0.85%
Mg 279.077†	3061.6	2.083	mg/L	0.0247	2.083	mg/L	0.0247	1.19%
Mn 257.610†	35697.7	0.9871	mg/L	0.00445	0.9871	mg/L	0.00445	0.45%
Mo 202.031†	20351.2	1.014	mg/L	0.0141	1.014	mg/L	0.0141	1.39%
Na 589.592†	619955.6	48.66	mg/L	0.090	48.66	mg/L	0.090	0.18%
Na 330.237†	1493.2	51.86	mg/L	0.515	51.86	mg/L	0.515	0.99%
Ni 231.604†	4042.9	0.9813	mg/L	0.00733	0.9813	mg/L	0.00733	0.75%
Pb 220.353†	15832.2	1.980	mg/L	0.0261	1.980	mg/L	0.0261	1.32%
Sb 206.836†	6834.9	2.089	mg/L	0.0285	2.089	mg/L	0.0285	1.36%
Se 196.026†	2852.5	1.915	mg/L	0.0265	1.915	mg/L	0.0265	1.38%
Si 288.158†	4512.2	2.096	mg/L	0.0205	2.096	mg/L	0.0205	0.98%
Sn 189.927†	3879.2	0.9966	mg/L	0.01355	0.9966	mg/L	0.01355	1.36%
Sr 421.552†	887987.9	0.9479	mg/L	0.00441	0.9479	mg/L	0.00441	0.46%
Ti 334.903†	21042.2	1.008	mg/L	0.0048	1.008	mg/L	0.0048	0.48%
Tl 190.801†	4956.3	1.930	mg/L	0.0241	1.930	mg/L	0.0241	1.25%
V 292.402†	130347.7	0.9998	mg/L	0.00944	0.9998	mg/L	0.00944	0.94%
Zn 206.200†	4092.0	1.009	mg/L	0.0091	1.009	mg/L	0.0091	0.90%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/16/2012 9:31:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2213341.6	98.06	%	0.553				0.56%
ScR 361.383	278537.1	97.41	%	0.507				0.52%
Ag 328.068†	10.1	0.00006	mg/L	0.000066	0.00006	mg/L	0.000066	115.23%
Al 308.215†	26.5	0.01485	mg/L	0.007996	0.01485	mg/L	0.007996	53.83%
As 188.979†	-1.6	-0.00086	mg/L	0.000829	-0.00086	mg/L	0.000829	96.37%
B 249.677†	12.2	0.00156	mg/L	0.000945	0.00156	mg/L	0.000945	60.64%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000465	-0.00043	mg/L	0.000465	108.94%
Be 313.042†	124.3	0.00019	mg/L	0.000018	0.00019	mg/L	0.000018	9.73%
Ca 317.933†	76.5	0.00539	mg/L	0.000861	0.00539	mg/L	0.000861	15.99%
Cd 228.802†	-1.5	-0.00004	mg/L	0.000172	-0.00004	mg/L	0.000172	411.16%
Co 228.616†	-18.7	-0.00053	mg/L	0.000066	-0.00053	mg/L	0.000066	12.48%
Cr 267.716†	-10.8	-0.00174	mg/L	0.000634	-0.00174	mg/L	0.000634	36.45%
Cu 324.752†	58.6	0.00023	mg/L	0.000092	0.00023	mg/L	0.000092	40.94%
Fe 273.955†	13.0	0.00995	mg/L	0.000573	0.00995	mg/L	0.000573	5.76%
K 766.490†	16.7	0.00837	mg/L	0.009145	0.00837	mg/L	0.009145	109.22%
Mg 279.077†	12.3	0.00835	mg/L	0.003074	0.00835	mg/L	0.003074	36.82%
Mn 257.610†	-2.6	-0.00007	mg/L	0.000109	-0.00007	mg/L	0.000109	153.26%
Mo 202.031†	18.0	0.00090	mg/L	0.000213	0.00090	mg/L	0.000213	23.74%
Na 589.592†	82.8	0.00650	mg/L	0.004130	0.00650	mg/L	0.004130	63.56%
Na 330.237†	-17.5	-0.6092	mg/L	0.11089	-0.6092	mg/L	0.11089	18.20%
Ni 231.604†	0.3	0.00009	mg/L	0.001926	0.00009	mg/L	0.001926	>999.9%
Pb 220.353†	3.0	0.00038	mg/L	0.001361	0.00038	mg/L	0.001361	359.60%
Sb 206.836†	12.0	0.00368	mg/L	0.000378	0.00368	mg/L	0.000378	10.29%
Se 196.026†	3.9	0.00260	mg/L	0.005079	0.00260	mg/L	0.005079	195.50%
Si 288.158†	0.1	0.00007	mg/L	0.002269	0.00007	mg/L	0.002269	>999.9%
Sn 189.927†	-3.1	-0.00079	mg/L	0.000775	-0.00079	mg/L	0.000775	98.02%
Sr 421.552†	93.8	0.00010	mg/L	0.000004	0.00010	mg/L	0.000004	4.49%
Ti 334.903†	8.6	0.00041	mg/L	0.000041	0.00041	mg/L	0.000041	9.99%
Tl 190.801†	1.1	0.00045	mg/L	0.001014	0.00045	mg/L	0.001014	224.76%
V 292.402†	-22.4	-0.00018	mg/L	0.000205	-0.00018	mg/L	0.000205	114.77%
Zn 206.200†	2.4	0.00060	mg/L	0.000874	0.00060	mg/L	0.000874	145.52%

Sequence No.: 8
Sample ID: VR30 B SWC

Autosampler Location: 304
Date Collected: 11/16/2012 9:36:01 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2266905.1	100.4	%	0.27				0.27%
ScR 361.383	289782.5	101.3	%	1.06				1.04%
Ag 328.068†	-170.5	-0.00091	mg/L	0.000144	-0.00456	mg/L	0.000721	15.82%
Al 308.215†	162648.8	91.33	mg/L	0.923	456.6	mg/L	4.61	1.01%
As 188.979†	43.3	0.06856	mg/L	0.000959	0.3428	mg/L	0.00479	1.40%
B 249.677†	34.4	0.00426	mg/L	0.001057	0.02132	mg/L	0.005286	24.80%
Ba 233.527†	19790.3	4.337	mg/L	0.0357	21.68	mg/L	0.179	0.82%
Be 313.042†	3080.4	0.00458	mg/L	0.000094	0.02288	mg/L	0.000469	2.05%
Ca 317.933†	413333.6	29.10	mg/L	0.312	145.5	mg/L	1.56	1.07%
Cd 228.802†	319.3	0.00847	mg/L	0.000204	0.04236	mg/L	0.001020	2.41%
Co 228.616†	2197.9	0.05672	mg/L	0.000438	0.2836	mg/L	0.00219	0.77%
Cr 267.716†	667.9	0.1104	mg/L	0.00120	0.5520	mg/L	0.00598	1.08%
Cu 324.752†	17950.1	0.07548	mg/L	0.000282	0.3774	mg/L	0.00141	0.37%
Fe 273.955†	207489.5	158.3	mg/L	1.90	791.3	mg/L	9.48	1.20%
K 766.490†	14039.4	7.044	mg/L	0.0813	35.22	mg/L	0.406	1.15%
Mg 279.077†	37594.5	25.41	mg/L	0.284	127.0	mg/L	1.42	1.12%
Mn 257.610†	328609.6	9.083	mg/L	0.1096	45.42	mg/L	0.548	1.21%
Mo 202.031†	90.3	0.00418	mg/L	0.000481	0.02090	mg/L	0.002403	11.49%
Na 589.592†	5621.5	0.4412	mg/L	0.00457	2.206	mg/L	0.0228	1.03%
Na 330.237†	-5.5	-0.07749	mg/L	0.151056	-0.3875	mg/L	0.75528	194.93%
Ni 231.604†	297.6	0.07221	mg/L	0.001673	0.3611	mg/L	0.00836	2.32%
Pb 220.353†	2347.5	0.3088	mg/L	0.00255	1.544	mg/L	0.0127	0.82%
Sb 206.836†	26.8	0.00801	mg/L	0.000467	0.04004	mg/L	0.002333	5.83%
Se 196.026†	16.3	0.01078	mg/L	0.004755	0.05392	mg/L	0.023776	44.10%
Si 288.158†	3340.8	1.555	mg/L	0.0200	7.777	mg/L	0.1001	1.29%
Sn 189.927†	-44.4	-0.00755	mg/L	0.000500	-0.03774	mg/L	0.002499	6.62%
Sr 421.552†	213985.5	0.2284	mg/L	0.00232	1.142	mg/L	0.0116	1.01%
Ti 334.903†	34546.6	1.656	mg/L	0.0190	8.281	mg/L	0.0949	1.15%
Tl 190.801†	-37.1	0.00141	mg/L	0.002325	0.00703	mg/L	0.011623	165.25%
V 292.402†	23994.9	0.1786	mg/L	0.00178	0.8930	mg/L	0.00888	0.99%
Zn 206.200†	3237.8	0.7987	mg/L	0.01198	3.993	mg/L	0.0599	1.50%

Sequence No.: 9
Sample ID: VR30 D SWC

Autosampler Location: 305
Date Collected: 11/16/2012 9:40:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 D SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR30 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2278324.3	100.9	%	0.13				0.13%
ScR 361.383	289032.3	101.1	%	0.60				0.59%
Ag 328.068†	-143.4	-0.00077	mg/L	0.000275	-0.00383	mg/L	0.001374	35.87%
Al 308.215†	202390.7	113.6	mg/L	1.13	568.2	mg/L	5.65	1.00%
As 188.979†	-78.3	0.04162	mg/L	0.003479	0.2081	mg/L	0.01740	8.36%
B 249.677†	75.1	0.00950	mg/L	0.000729	0.04749	mg/L	0.003647	7.68%
Ba 233.527†	7044.7	1.538	mg/L	0.0050	7.688	mg/L	0.0248	0.32%
Be 313.042†	2287.1	0.00337	mg/L	0.000038	0.01686	mg/L	0.000188	1.11%
Ca 317.933†	316955.2	22.31	mg/L	0.261	111.6	mg/L	1.31	1.17%
Cd 228.802†	170.4	0.00484	mg/L	0.000162	0.02418	mg/L	0.000811	3.35%
Co 228.616†	1530.3	0.03634	mg/L	0.000259	0.1817	mg/L	0.00130	0.71%
Cr 267.716†	677.4	0.1101	mg/L	0.00083	0.5504	mg/L	0.00414	0.75%
Cu 324.752†	22713.0	0.09068	mg/L	0.000915	0.4534	mg/L	0.00458	1.01%
Fe 273.955†	122919.1	93.75	mg/L	0.757	468.7	mg/L	3.78	0.81%
K 766.490†	10663.0	5.350	mg/L	0.0506	26.75	mg/L	0.253	0.95%
Mg 279.077†	36162.3	24.47	mg/L	0.235	122.4	mg/L	1.17	0.96%
Mn 257.610†	117928.4	3.260	mg/L	0.0282	16.30	mg/L	0.141	0.87%
Mo 202.031†	50.0	0.00224	mg/L	0.000279	0.01122	mg/L	0.001396	12.44%
Na 589.592†	10175.1	0.7986	mg/L	0.00830	3.993	mg/L	0.0415	1.04%
Na 330.237†	-3.2	0.3999	mg/L	0.12593	1.999	mg/L	0.6297	31.49%
Ni 231.604†	374.6	0.09089	mg/L	0.001860	0.4545	mg/L	0.00930	2.05%
Pb 220.353†	2020.7	0.2760	mg/L	0.00190	1.380	mg/L	0.0095	0.69%
Sb 206.836†	4.1	0.00152	mg/L	0.002680	0.00758	mg/L	0.013399	176.83%
Se 196.026†	19.3	0.01286	mg/L	0.003491	0.06428	mg/L	0.017453	27.15%
Si 288.158†	2012.7	0.9381	mg/L	0.00831	4.691	mg/L	0.0416	0.89%
Sn 189.927†	-35.4	-0.00589	mg/L	0.000936	-0.02943	mg/L	0.004678	15.90%
Sr 421.552†	256275.4	0.2736	mg/L	0.00281	1.368	mg/L	0.0140	1.03%
Ti 334.903†	61510.5	2.950	mg/L	0.0262	14.75	mg/L	0.131	0.89%
Tl 190.801†	-15.9	0.00298	mg/L	0.001542	0.01491	mg/L	0.007708	51.69%
V 292.402†	20627.2	0.1535	mg/L	0.00173	0.7677	mg/L	0.00863	1.12%
Zn 206.200†	1977.1	0.4877	mg/L	0.00234	2.439	mg/L	0.0117	0.48%

Sequence No.: 10
Sample ID: VR30 E SWC

Autosampler Location: 306
Date Collected: 11/16/2012 9:44:05 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR30 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311384.2	102.4	%	0.49				0.48%
ScR 361.383	292296.6	102.2	%	0.90				0.88%
Ag 328.068†	-158.6	-0.00084	mg/L	0.000344	-0.00421	mg/L	0.001718	40.78%
Al 308.215†	240475.3	135.0	mg/L	1.32	675.1	mg/L	6.59	0.98%
As 188.979†	-127.2	0.03169	mg/L	0.002950	0.1585	mg/L	0.01475	9.31%
B 249.677†	62.6	0.00788	mg/L	0.000863	0.03942	mg/L	0.004317	10.95%
Ba 233.527†	6971.3	1.519	mg/L	0.0137	7.594	mg/L	0.0685	0.90%
Be 313.042†	2594.1	0.00382	mg/L	0.000047	0.01910	mg/L	0.000233	1.22%
Ca 317.933†	218878.8	15.41	mg/L	0.157	77.05	mg/L	0.783	1.02%
Cd 228.802†	63.8	0.00150	mg/L	0.000182	0.00749	mg/L	0.000908	12.12%
Co 228.616†	1830.0	0.04358	mg/L	0.000563	0.2179	mg/L	0.00281	1.29%
Cr 267.716†	708.5	0.1157	mg/L	0.00192	0.5784	mg/L	0.00958	1.66%
Cu 324.752†	26515.0	0.1059	mg/L	0.00110	0.5294	mg/L	0.00550	1.04%
Fe 273.955†	143936.1	109.8	mg/L	1.24	548.9	mg/L	6.21	1.13%
K 766.490†	11246.5	5.643	mg/L	0.0386	28.21	mg/L	0.193	0.68%
Mg 279.077†	39859.6	26.97	mg/L	0.262	134.9	mg/L	1.31	0.97%
Mn 257.610†	62486.0	1.727	mg/L	0.0192	8.635	mg/L	0.0959	1.11%
Mo 202.031†	31.2	0.00138	mg/L	0.000182	0.00692	mg/L	0.000908	13.12%
Na 589.592†	12027.3	0.9440	mg/L	0.01222	4.720	mg/L	0.0611	1.29%
Na 330.237†	-8.2	0.3827	mg/L	0.17400	1.913	mg/L	0.8700	45.47%
Ni 231.604†	417.3	0.1013	mg/L	0.00226	0.5063	mg/L	0.01128	2.23%
Pb 220.353†	422.7	0.08070	mg/L	0.000817	0.4035	mg/L	0.00408	1.01%
Sb 206.836†	4.8	0.00203	mg/L	0.002279	0.01013	mg/L	0.011394	112.52%
Se 196.026†	22.1	0.01469	mg/L	0.002003	0.07343	mg/L	0.010016	13.64%
Si 288.158†	1514.3	0.7069	mg/L	0.00805	3.534	mg/L	0.0403	1.14%
Sn 189.927†	-30.3	-0.00535	mg/L	0.000385	-0.02676	mg/L	0.001923	7.19%
Sr 421.552†	164339.3	0.1754	mg/L	0.00187	0.8772	mg/L	0.00933	1.06%
Ti 334.903†	72845.9	3.495	mg/L	0.0345	17.47	mg/L	0.172	0.99%
Tl 190.801†	-27.4	0.00002	mg/L	0.002025	0.00012	mg/L	0.010127	>999.9%
V 292.402†	24789.3	0.1842	mg/L	0.00209	0.9212	mg/L	0.01046	1.14%
Zn 206.200†	1558.1	0.3843	mg/L	0.00293	1.922	mg/L	0.0147	0.76%

Sequence No.: 11
Sample ID: VR30 F SWC

Autosampler Location: 307
Date Collected: 11/16/2012 9:48:06 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2335671.1	103.5	%	0.57				0.56%
ScR 361.383	295425.7	103.3	%	0.36				0.35%
Ag 328.068†	-123.7	-0.00065	mg/L	0.000122	-0.00325	mg/L	0.000608	18.72%
Al 308.215†	243146.9	136.5	mg/L	1.55	682.6	mg/L	7.75	1.14%
As 188.979†	-124.0	0.03516	mg/L	0.003806	0.1758	mg/L	0.01903	10.83%
B 249.677†	52.3	0.00658	mg/L	0.000314	0.03288	mg/L	0.001572	4.78%
Ba 233.527†	5947.7	1.294	mg/L	0.0080	6.468	mg/L	0.0399	0.62%
Be 313.042†	2624.1	0.00387	mg/L	0.000009	0.01934	mg/L	0.000043	0.22%
Ca 317.933†	198838.3	14.00	mg/L	0.147	69.99	mg/L	0.734	1.05%
Cd 228.802†	65.4	0.00157	mg/L	0.000171	0.00786	mg/L	0.000854	10.85%
Co 228.616†	1760.4	0.04156	mg/L	0.000875	0.2078	mg/L	0.00438	2.11%
Cr 267.716†	714.1	0.1165	mg/L	0.00089	0.5825	mg/L	0.00445	0.76%
Cu 324.752†	28865.0	0.1147	mg/L	0.00267	0.5737	mg/L	0.01336	2.33%
Fe 273.955†	139042.8	106.0	mg/L	0.68	530.2	mg/L	3.39	0.64%
K 766.490†	11233.6	5.636	mg/L	0.0632	28.18	mg/L	0.316	1.12%
Mg 279.077†	38352.7	25.95	mg/L	0.216	129.8	mg/L	1.08	0.83%
Mn 257.610†	73481.2	2.031	mg/L	0.0163	10.15	mg/L	0.081	0.80%
Mo 202.031†	25.7	0.00113	mg/L	0.000660	0.00563	mg/L	0.003301	58.66%
Na 589.592†	12361.3	0.9702	mg/L	0.01292	4.851	mg/L	0.0646	1.33%
Na 330.237†	-3.6	0.5544	mg/L	0.07014	2.772	mg/L	0.3507	12.65%
Ni 231.604†	416.3	0.1010	mg/L	0.00188	0.5051	mg/L	0.00939	1.86%
Pb 220.353†	313.0	0.06748	mg/L	0.001074	0.3374	mg/L	0.00537	1.59%
Sb 206.836†	5.3	0.00213	mg/L	0.001072	0.01064	mg/L	0.005358	50.35%
Se 196.026†	22.5	0.01499	mg/L	0.004442	0.07497	mg/L	0.022212	29.63%
Si 288.158†	1302.0	0.6081	mg/L	0.00665	3.041	mg/L	0.0333	1.09%
Sn 189.927†	-26.8	-0.00464	mg/L	0.001177	-0.02322	mg/L	0.005884	25.34%
Sr 421.552†	170535.5	0.1821	mg/L	0.00217	0.9103	mg/L	0.01084	1.19%
Ti 334.903†	74072.0	3.553	mg/L	0.0371	17.77	mg/L	0.186	1.04%
Tl 190.801†	-24.7	0.00076	mg/L	0.002734	0.00382	mg/L	0.013671	358.34%
V 292.402†	22669.5	0.1682	mg/L	0.00328	0.8410	mg/L	0.01640	1.95%
Zn 206.200†	1583.3	0.3905	mg/L	0.00192	1.953	mg/L	0.0096	0.49%

Sequence No.: 12
Sample ID: VR30 G SWC

Autosampler Location: 308
Date Collected: 11/16/2012 9:52:07 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 G SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2282264.3	101.1	%	0.28				0.28%
ScR 361.383	294092.7	102.9	%	1.17				1.14%
Ag 328.068†	154.9	0.00093	mg/L	0.000133	0.00466	mg/L	0.000666	14.28%
Al 308.215†	259195.3	145.5	mg/L	1.35	727.7	mg/L	6.77	0.93%
As 188.979†	-133.3	0.03835	mg/L	0.001463	0.1917	mg/L	0.00732	3.82%
B 249.677†	54.6	0.00686	mg/L	0.000813	0.03428	mg/L	0.004063	11.85%
Ba 233.527†	5452.1	1.183	mg/L	0.0098	5.917	mg/L	0.0489	0.83%
Be 313.042†	2750.3	0.00405	mg/L	0.000054	0.02025	mg/L	0.000272	1.35%
Ca 317.933†	226126.0	15.92	mg/L	0.151	79.60	mg/L	0.757	0.95%
Cd 228.802†	57.1	0.00130	mg/L	0.000018	0.00649	mg/L	0.000091	1.40%
Co 228.616†	1882.9	0.04439	mg/L	0.000381	0.2220	mg/L	0.00191	0.86%
Cr 267.716†	1027.6	0.1670	mg/L	0.00182	0.8349	mg/L	0.00912	1.09%
Cu 324.752†	39506.5	0.1559	mg/L	0.00068	0.7794	mg/L	0.00342	0.44%
Fe 273.955†	147721.2	112.7	mg/L	0.84	563.3	mg/L	4.18	0.74%
K 766.490†	11750.0	5.895	mg/L	0.0618	29.48	mg/L	0.309	1.05%
Mg 279.077†	42799.3	28.96	mg/L	0.258	144.8	mg/L	1.29	0.89%
Mn 257.610†	66779.2	1.846	mg/L	0.0135	9.229	mg/L	0.0674	0.73%
Mo 202.031†	34.3	0.00153	mg/L	0.000201	0.00764	mg/L	0.001004	13.14%
Na 589.592†	14629.0	1.148	mg/L	0.0103	5.741	mg/L	0.0517	0.90%
Na 330.237†	-4.2	0.6052	mg/L	0.01543	3.026	mg/L	0.0771	2.55%
Ni 231.604†	502.6	0.1220	mg/L	0.00241	0.6098	mg/L	0.01207	1.98%
Pb 220.353†	408.1	0.08130	mg/L	0.001102	0.4065	mg/L	0.00551	1.36%
Sb 206.836†	5.5	0.00165	mg/L	0.002497	0.00823	mg/L	0.012483	151.72%
Se 196.026†	33.0	0.02201	mg/L	0.004233	0.1100	mg/L	0.02116	19.23%
Si 288.158†	1008.6	0.4721	mg/L	0.00726	2.361	mg/L	0.0363	1.54%
Sn 189.927†	-35.7	-0.00664	mg/L	0.000881	-0.03319	mg/L	0.004404	13.27%
Sr 421.552†	198112.6	0.2115	mg/L	0.00183	1.057	mg/L	0.0092	0.87%
Ti 334.903†	80106.7	3.843	mg/L	0.0309	19.21	mg/L	0.154	0.80%
Tl 190.801†	-34.4	-0.00245	mg/L	0.003700	-0.01226	mg/L	0.018500	150.95%
V 292.402†	25520.1	0.1898	mg/L	0.00102	0.9488	mg/L	0.00509	0.54%
Zn 206.200†	1509.9	0.3724	mg/L	0.00300	1.862	mg/L	0.0150	0.81%

Sequence No.: 13
Sample ID: VR30 H SWC

Autosampler Location: 309
Date Collected: 11/16/2012 9:56:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR30 H SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR30 H SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2304118.0	102.1	%	0.36				0.35%
ScR 361.383	292173.5	102.2	%	0.43				0.42%
Ag 328.068†	-26.8	-0.00011	mg/L	0.000153	-0.00056	mg/L	0.000767	137.32%
Al 308.215†	182483.0	102.5	mg/L	0.90	512.3	mg/L	4.51	0.88%
As 188.979†	-86.8	0.03301	mg/L	0.003044	0.1651	mg/L	0.01522	9.22%
B 249.677†	56.6	0.00714	mg/L	0.000636	0.03572	mg/L	0.003182	8.91%
Ba 233.527†	8522.4	1.865	mg/L	0.0101	9.324	mg/L	0.0507	0.54%
Be 313.042†	1982.1	0.00292	mg/L	0.000037	0.01460	mg/L	0.000184	1.26%
Ca 317.933†	200605.4	14.12	mg/L	0.067	70.62	mg/L	0.337	0.48%
Cd 228.802†	142.9	0.00408	mg/L	0.000100	0.02041	mg/L	0.000498	2.44%
Co 228.616†	1380.0	0.03248	mg/L	0.000055	0.1624	mg/L	0.00027	0.17%
Cr 267.716†	619.7	0.1012	mg/L	0.00056	0.5058	mg/L	0.00278	0.55%
Cu 324.752†	14634.6	0.05931	mg/L	0.000195	0.2966	mg/L	0.00098	0.33%
Fe 273.955†	111084.1	84.72	mg/L	0.895	423.6	mg/L	4.47	1.06%
K 766.490†	11432.8	5.736	mg/L	0.0169	28.68	mg/L	0.085	0.30%
Mg 279.077†	24568.5	16.62	mg/L	0.121	83.08	mg/L	0.606	0.73%
Mn 257.610†	126564.1	3.498	mg/L	0.0331	17.49	mg/L	0.166	0.95%
Mo 202.031†	36.8	0.00168	mg/L	0.000151	0.00839	mg/L	0.000757	9.02%
Na 589.592†	9746.1	0.7649	mg/L	0.00707	3.825	mg/L	0.0354	0.92%
Na 330.237†	-3.3	0.3435	mg/L	0.17601	1.717	mg/L	0.8801	51.25%
Ni 231.604†	365.8	0.08876	mg/L	0.001396	0.4438	mg/L	0.00698	1.57%
Pb 220.353†	1019.0	0.1485	mg/L	0.00129	0.7425	mg/L	0.00646	0.87%
Sb 206.836†	7.4	0.00251	mg/L	0.001512	0.01254	mg/L	0.007558	60.27%
Se 196.026†	17.1	0.01136	mg/L	0.000712	0.05681	mg/L	0.003560	6.27%
Si 288.158†	3243.5	1.509	mg/L	0.0108	7.545	mg/L	0.0539	0.71%
Sn 189.927†	-29.3	-0.00536	mg/L	0.000912	-0.02682	mg/L	0.004560	17.01%
Sr 421.552†	164364.3	0.1755	mg/L	0.00133	0.8773	mg/L	0.00665	0.76%
Ti 334.903†	58175.4	2.791	mg/L	0.0237	13.95	mg/L	0.119	0.85%
Tl 190.801†	-17.9	0.00134	mg/L	0.000928	0.00671	mg/L	0.004642	69.21%
V 292.402†	18134.9	0.1349	mg/L	0.00040	0.6745	mg/L	0.00200	0.30%
Zn 206.200†	2160.2	0.5329	mg/L	0.00349	2.664	mg/L	0.0174	0.65%

Sequence No.: 14
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 11/16/2012 10:00:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2211042.3	97.96	%	0.069				0.07%
ScR 361.383	281425.6	98.42	%	1.154				1.17%
Ag 328.068†	174051.3	0.9852	mg/L	0.00100	0.9852	mg/L	0.00100	0.10%
Al 308.215†	3696.9	2.041	mg/L	0.0284	2.041	mg/L	0.0284	1.39%
As 188.979†	3657.6	1.961	mg/L	0.0138	1.961	mg/L	0.0138	0.70%
B 249.677†	7567.5	0.9649	mg/L	0.01213	0.9649	mg/L	0.01213	1.26%
Ba 233.527†	4721.2	1.040	mg/L	0.0139	1.040	mg/L	0.0139	1.34%
Be 313.042†	626887.5	0.9424	mg/L	0.00875	0.9424	mg/L	0.00875	0.93%
Ca 317.933†	27675.8	1.948	mg/L	0.0181	1.948	mg/L	0.0181	0.93%
Cd 228.802†	33109.2	1.033	mg/L	0.0016	1.033	mg/L	0.0016	0.15%
Co 228.616†	35891.2	1.016	mg/L	0.0028	1.016	mg/L	0.0028	0.27%
Cr 267.716†	6399.9	1.030	mg/L	0.0131	1.030	mg/L	0.0131	1.27%
Cu 324.752†	262871.7	1.010	mg/L	0.0029	1.010	mg/L	0.0029	0.29%
Fe 273.955†	2689.1	2.044	mg/L	0.0153	2.044	mg/L	0.0153	0.75%
K 766.490†	39762.4	19.95	mg/L	0.215	19.95	mg/L	0.215	1.08%
Mg 279.077†	3000.3	2.042	mg/L	0.0213	2.042	mg/L	0.0213	1.04%
Mn 257.610†	35687.8	0.9868	mg/L	0.00584	0.9868	mg/L	0.00584	0.59%
Mo 202.031†	20686.3	1.031	mg/L	0.0051	1.031	mg/L	0.0051	0.50%
Na 589.592†	624588.1	49.02	mg/L	0.566	49.02	mg/L	0.566	1.16%
Na 330.237†	1491.7	51.81	mg/L	0.515	51.81	mg/L	0.515	0.99%
Ni 231.604†	4026.4	0.9773	mg/L	0.01189	0.9773	mg/L	0.01189	1.22%
Pb 220.353†	16046.0	2.006	mg/L	0.0116	2.006	mg/L	0.0116	0.58%
Sb 206.836†	6936.1	2.120	mg/L	0.0113	2.120	mg/L	0.0113	0.53%
Se 196.026†	2873.6	1.929	mg/L	0.0077	1.929	mg/L	0.0077	0.40%
Si 288.158†	4492.6	2.087	mg/L	0.0245	2.087	mg/L	0.0245	1.17%
Sn 189.927†	3917.5	1.006	mg/L	0.0067	1.006	mg/L	0.0067	0.67%
Sr 421.552†	893900.0	0.9543	mg/L	0.00885	0.9543	mg/L	0.00885	0.93%
Ti 334.903†	21172.9	1.015	mg/L	0.0086	1.015	mg/L	0.0086	0.85%
Tl 190.801†	5037.5	1.962	mg/L	0.0100	1.962	mg/L	0.0100	0.51%
V 292.402†	132402.6	1.016	mg/L	0.0017	1.016	mg/L	0.0017	0.16%
Zn 206.200†	4049.1	0.9986	mg/L	0.00989	0.9986	mg/L	0.00989	0.99%

Sequence No.: 15
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 11/16/2012 10:05:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2265302.0	100.4	%	0.82				0.82%
ScR 361.383	286386.1	100.2	%	1.19				1.19%
Ag 328.068†	43.5	0.00025	mg/L	0.000120	0.00025	mg/L	0.000120	48.67%
Al 308.215†	21.7	0.01219	mg/L	0.007834	0.01219	mg/L	0.007834	64.25%
As 188.979†	0.3	0.00019	mg/L	0.000600	0.00019	mg/L	0.000600	312.17%
B 249.677†	12.0	0.00153	mg/L	0.000504	0.00153	mg/L	0.000504	32.86%
Ba 233.527†	-1.7	-0.00038	mg/L	0.000659	-0.00038	mg/L	0.000659	173.90%
Be 313.042†	64.0	0.00010	mg/L	0.000019	0.00010	mg/L	0.000019	19.48%
Ca 317.933†	16.5	0.00116	mg/L	0.000843	0.00116	mg/L	0.000843	72.42%
Cd 228.802†	-8.9	-0.00028	mg/L	0.000164	-0.00028	mg/L	0.000164	58.05%
Co 228.616†	-15.4	-0.00044	mg/L	0.000071	-0.00044	mg/L	0.000071	16.37%
Cr 267.716†	-8.6	-0.00139	mg/L	0.000844	-0.00139	mg/L	0.000844	60.74%
Cu 324.752†	68.6	0.00026	mg/L	0.000163	0.00026	mg/L	0.000163	61.90%
Fe 273.955†	5.6	0.00430	mg/L	0.000901	0.00430	mg/L	0.000901	20.97%
K 766.490†	18.2	0.00913	mg/L	0.009749	0.00913	mg/L	0.009749	106.78%
Mg 279.077†	0.3	0.00020	mg/L	0.005138	0.00020	mg/L	0.005138	>999.9%
Mn 257.610†	-7.6	-0.00021	mg/L	0.000032	-0.00021	mg/L	0.000032	15.24%
Mo 202.031†	19.2	0.00096	mg/L	0.000202	0.00096	mg/L	0.000202	21.17%
Na 589.592†	39.1	0.00307	mg/L	0.003488	0.00307	mg/L	0.003488	113.79%
Na 330.237†	-5.3	-0.1843	mg/L	0.30022	-0.1843	mg/L	0.30022	162.93%
Ni 231.604†	-1.2	-0.00029	mg/L	0.000758	-0.00029	mg/L	0.000758	263.29%
Pb 220.353†	-0.0	-0.00000	mg/L	0.000645	-0.00000	mg/L	0.000645	>999.9%
Sb 206.836†	5.6	0.00173	mg/L	0.000288	0.00173	mg/L	0.000288	16.60%
Se 196.026†	5.5	0.00369	mg/L	0.002885	0.00369	mg/L	0.002885	78.20%
Si 288.158†	-4.6	-0.00215	mg/L	0.000930	-0.00215	mg/L	0.000930	43.21%
Sn 189.927†	-0.1	-0.00004	mg/L	0.000153	-0.00004	mg/L	0.000153	422.92%
Sr 421.552†	74.2	0.00008	mg/L	0.000064	0.00008	mg/L	0.000064	81.28%
Ti 334.903†	13.8	0.00066	mg/L	0.000293	0.00066	mg/L	0.000293	44.17%
Tl 190.801†	3.8	0.00148	mg/L	0.002469	0.00148	mg/L	0.002469	166.41%
V 292.402†	-13.7	-0.00011	mg/L	0.000165	-0.00011	mg/L	0.000165	148.94%
Zn 206.200†	0.1	0.00001	mg/L	0.000819	0.00001	mg/L	0.000819	>999.9%

Sequence No.: 16
Sample ID: VR32 A-L SWC

Autosampler Location: 310
Date Collected: 11/16/2012 10:09:17 AM
Data Type: Original

Dilution: ~~5.000000x~~
25 BA 11/16/12

Nebulizer Parameters: VR32 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2263964.5	100.3	%	1.16				1.16%
ScR 361.383	289102.2	101.1	%	1.21				1.20%
Ag 328.068†	1.8	0.00002	mg/L	0.000139	0.00009	mg/L	0.000697	766.84%
Al 308.215†	35071.1	19.69	mg/L	0.251	98.46	mg/L	1.256	1.28%
As 188.979†	-6.8	0.01278	mg/L	0.001588	0.06388	mg/L	0.007941	12.43%
B 249.677†	16.0	0.00202	mg/L	0.000804	0.01011	mg/L	0.004018	39.73%
Ba 233.527†	1517.2	0.3312	mg/L	0.00507	1.656	mg/L	0.0253	1.53%
Be 313.042†	477.1	0.00070	mg/L	0.000016	0.00352	mg/L	0.000078	2.20%
Ca 317.933†	53929.3	3.797	mg/L	0.0476	18.98	mg/L	0.238	1.25%
Cd 228.802†	51.9	0.00150	mg/L	0.000067	0.00748	mg/L	0.000336	4.49%
Co 228.616†	318.2	0.00762	mg/L	0.000172	0.03808	mg/L	0.000858	2.25%
Cr 267.716†	172.9	0.02808	mg/L	0.000513	0.1404	mg/L	0.00257	1.83%
Cu 324.752†	3757.1	0.01517	mg/L	0.000277	0.07583	mg/L	0.001386	1.83%
Fe 273.955†	25985.8	19.82	mg/L	0.298	99.10	mg/L	1.488	1.50%
K 766.490†	3537.6	1.775	mg/L	0.0078	8.874	mg/L	0.0392	0.44%
Mg 279.077†	6835.6	4.625	mg/L	0.0727	23.12	mg/L	0.364	1.57%
Mn 257.610†	34973.5	0.9667	mg/L	0.01391	4.833	mg/L	0.0696	1.44%
Mo 202.031†	14.8	0.00069	mg/L	0.000185	0.00347	mg/L	0.000926	26.67%
Na 589.592†	2333.0	0.1831	mg/L	0.00242	0.9156	mg/L	0.01208	1.32%
Na 330.237†	-7.3	-0.1758	mg/L	0.12318	-0.8792	mg/L	0.61592	70.05%
Ni 231.604†	106.2	0.02576	mg/L	0.001486	0.1288	mg/L	0.00743	5.77%
Pb 220.353†	344.1	0.04693	mg/L	0.000479	0.2346	mg/L	0.00240	1.02%
Sb 206.836†	2.8	0.00079	mg/L	0.002290	0.00394	mg/L	0.011451	290.68%
Se 196.026†	7.5	0.00503	mg/L	0.000195	0.02515	mg/L	0.000974	3.87%
Si 288.158†	610.3	0.2842	mg/L	0.00735	1.421	mg/L	0.0367	2.59%
Sn 189.927†	-15.2	-0.00333	mg/L	0.000876	-0.01667	mg/L	0.004380	26.27%
Sr 421.552†	49479.6	0.05282	mg/L	0.000685	0.2641	mg/L	0.00343	1.30%
Ti 334.903†	12091.4	0.5800	mg/L	0.00664	2.900	mg/L	0.0332	1.14%
Tl 190.801†	-4.1	0.00038	mg/L	0.001668	0.00189	mg/L	0.008338	442.25%
V 292.402†	3634.0	0.02700	mg/L	0.000188	0.1350	mg/L	0.00094	0.70%
Zn 206.200†	643.0	0.1586	mg/L	0.00272	0.7930	mg/L	0.01358	1.71%

Sequence No.: 17
Sample ID: VR32 A SWC

Autosampler Location: 311
Date Collected: 11/16/2012 10:13:18 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2294229.4	101.6	%	0.46				0.45%
ScR 361.383	295890.1	103.5	%	0.43				0.41%
Ag 328.068†	-156.2	-0.00084	mg/L	0.000165	-0.00422	mg/L	0.000823	19.50%
Al 308.215†	177445.1	99.63	mg/L	0.360	498.2	mg/L	1.80	0.36%
As 188.979†	-27.6	0.06704	mg/L	0.003549	0.3352	mg/L	0.01774	5.29%
B 249.677†	73.7	0.00931	mg/L	0.000509	0.04654	mg/L	0.002545	5.47%
Ba 233.527†	7580.0	1.654	mg/L	0.0060	8.272	mg/L	0.0300	0.36%
Be 313.042†	2081.1	0.00307	mg/L	0.000006	0.01533	mg/L	0.000032	0.21%
Ca 317.933†	274913.4	19.35	mg/L	0.161	96.77	mg/L	0.804	0.83%
Cd 228.802†	304.1	0.00885	mg/L	0.000145	0.04426	mg/L	0.000726	1.64%
Co 228.616†	1656.8	0.03993	mg/L	0.000312	0.1997	mg/L	0.00156	0.78%
Cr 267.716†	870.7	0.1414	mg/L	0.00064	0.7071	mg/L	0.00321	0.45%
Cu 324.752†	18754.4	0.07576	mg/L	0.000979	0.3788	mg/L	0.00489	1.29%
Fe 273.955†	131271.6	100.1	mg/L	0.52	500.6	mg/L	2.62	0.52%
K 766.490†	17547.5	8.804	mg/L	0.0319	44.02	mg/L	0.159	0.36%
Mg 279.077†	34216.1	23.15	mg/L	0.098	115.7	mg/L	0.49	0.42%
Mn 257.610†	176776.0	4.886	mg/L	0.0265	24.43	mg/L	0.133	0.54%
Mo 202.031†	68.0	0.00317	mg/L	0.000211	0.01585	mg/L	0.001055	6.65%
Na 589.592†	11555.3	0.9069	mg/L	0.00610	4.535	mg/L	0.0305	0.67%
Na 330.237†	4.8	0.5629	mg/L	0.15697	2.815	mg/L	0.7848	27.88%
Ni 231.604†	518.2	0.1257	mg/L	0.00069	0.6287	mg/L	0.00343	0.55%
Pb 220.353†	1721.2	0.2350	mg/L	0.00049	1.175	mg/L	0.0024	0.21%
Sb 206.836†	16.5	0.00474	mg/L	0.001568	0.02368	mg/L	0.007839	33.10%
Se 196.026†	20.0	0.01335	mg/L	0.003491	0.06677	mg/L	0.017455	26.14%
Si 288.158†	2923.8	1.361	mg/L	0.0023	6.807	mg/L	0.0114	0.17%
Sn 189.927†	-36.0	-0.00641	mg/L	0.000870	-0.03203	mg/L	0.004351	13.58%
Sr 421.552†	246355.3	0.2630	mg/L	0.00116	1.315	mg/L	0.0058	0.44%
Ti 334.903†	60402.7	2.897	mg/L	0.0140	14.49	mg/L	0.070	0.48%
Tl 190.801†	-24.7	0.00025	mg/L	0.001048	0.00123	mg/L	0.005241	425.28%
V 292.402†	18226.2	0.1354	mg/L	0.00162	0.6769	mg/L	0.00811	1.20%
Zn 206.200†	3230.5	0.7969	mg/L	0.00316	3.984	mg/L	0.0158	0.40%

Sequence No.: 18
Sample ID: VR32 ADUP SWC

Autosampler Location: 312
Date Collected: 11/16/2012 10:17:19 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ADUP SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2258859.7	100.1	%	0.74				0.74%
ScR 361.383	291427.6	101.9	%	0.98				0.96%
Ag 328.068†	-180.6	-0.00098	mg/L	0.000168	-0.00490	mg/L	0.000841	17.17%
Al 308.215†	185344.6	104.1	mg/L	2.26	520.3	mg/L	11.32	2.18%
As 188.979†	-35.8	0.06971	mg/L	0.002642	0.3486	mg/L	0.01321	3.79%
B 249.677†	84.4	0.01068	mg/L	0.000531	0.05338	mg/L	0.002653	4.97%
Ba 233.527†	7849.4	1.713	mg/L	0.0148	8.565	mg/L	0.0740	0.86%
Be 313.042†	2146.5	0.00316	mg/L	0.000038	0.01580	mg/L	0.000190	1.21%
Ca 317.933†	297797.0	20.97	mg/L	0.486	104.8	mg/L	2.43	2.32%
Cd 228.802†	308.7	0.00898	mg/L	0.000333	0.04492	mg/L	0.001666	3.71%
Co 228.616†	1688.0	0.04027	mg/L	0.000520	0.2013	mg/L	0.00260	1.29%
Cr 267.716†	859.6	0.1398	mg/L	0.00211	0.6990	mg/L	0.01053	1.51%
Cu 324.752†	21237.5	0.08548	mg/L	0.000181	0.4274	mg/L	0.00090	0.21%
Fe 273.955†	138096.9	105.3	mg/L	2.40	526.6	mg/L	11.98	2.27%
K 766.490†	18920.4	9.493	mg/L	0.2101	47.46	mg/L	1.051	2.21%
Mg 279.077†	35088.2	23.74	mg/L	0.528	118.7	mg/L	2.64	2.22%
Mn 257.610†	173937.9	4.808	mg/L	0.1119	24.04	mg/L	0.560	2.33%
Mo 202.031†	73.3	0.00342	mg/L	0.000123	0.01708	mg/L	0.000616	3.61%
Na 589.592†	12184.0	0.9563	mg/L	0.01839	4.781	mg/L	0.0920	1.92%
Na 330.237†	5.5	0.6358	mg/L	0.14328	3.179	mg/L	0.7164	22.54%
Ni 231.604†	548.6	0.1331	mg/L	0.00071	0.6656	mg/L	0.00357	0.54%
Pb 220.353†	1770.7	0.2420	mg/L	0.00142	1.210	mg/L	0.0071	0.59%
Sb 206.836†	11.0	0.00323	mg/L	0.003166	0.01614	mg/L	0.015831	98.11%
Se 196.026†	18.3	0.01221	mg/L	0.003090	0.06103	mg/L	0.015451	25.32%
Si 288.158†	2258.9	1.052	mg/L	0.0106	5.262	mg/L	0.0528	1.00%
Sn 189.927†	-41.6	-0.00763	mg/L	0.000700	-0.03814	mg/L	0.003502	9.18%
Sr 421.552†	273751.5	0.2922	mg/L	0.00604	1.461	mg/L	0.0302	2.07%
Ti 334.903†	65590.3	3.146	mg/L	0.0704	15.73	mg/L	0.352	2.24%
Tl 190.801†	-25.2	0.00060	mg/L	0.001117	0.00300	mg/L	0.005586	186.48%
V 292.402†	19485.2	0.1447	mg/L	0.00087	0.7233	mg/L	0.00437	0.60%
Zn 206.200†	3337.0	0.8232	mg/L	0.00465	4.116	mg/L	0.0232	0.56%

Sequence No.: 19
Sample ID: VR32 ASPK SWC

Autosampler Location: 313
Date Collected: 11/16/2012 10:21:20 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2267775.0	100.5	%	0.74				0.74%
ScR 361.383	288152.1	100.8	%	0.99				0.99%
Ag 328.068†	35393.3	0.2004	mg/L	0.00195	1.002	mg/L	0.0098	0.97%
Al 308.215†	185558.0	104.2	mg/L	0.86	520.9	mg/L	4.28	0.82%
As 188.979†	1450.8	0.8573	mg/L	0.00259	4.286	mg/L	0.0129	0.30%
B 249.677†	95.2	0.01162	mg/L	0.001174	0.05810	mg/L	0.005871	10.10%
Ba 233.527†	11720.8	2.566	mg/L	0.0301	12.83	mg/L	0.150	1.17%
Be 313.042†	133048.2	0.2000	mg/L	0.00124	0.9998	mg/L	0.00622	0.62%
Ca 317.933†	407610.2	28.70	mg/L	0.227	143.5	mg/L	1.14	0.79%
Cd 228.802†	7462.7	0.2297	mg/L	0.00052	1.149	mg/L	0.0026	0.23%
Co 228.616†	9152.5	0.2518	mg/L	0.00082	1.259	mg/L	0.0041	0.33%
Cr 267.716†	2209.3	0.3566	mg/L	0.00450	1.783	mg/L	0.0225	1.26%
Cu 324.752†	77635.0	0.3023	mg/L	0.00256	1.512	mg/L	0.0128	0.85%
Fe 273.955†	137361.3	104.8	mg/L	1.04	523.8	mg/L	5.21	1.00%
K 766.490†	26725.3	13.41	mg/L	0.100	67.04	mg/L	0.502	0.75%
Mg 279.077†	40422.4	27.36	mg/L	0.279	136.8	mg/L	1.40	1.02%
Mn 257.610†	183860.9	5.082	mg/L	0.0486	25.41	mg/L	0.243	0.96%
Mo 202.031†	79.1	0.00361	mg/L	0.000193	0.01806	mg/L	0.000965	5.34%
Na 589.592†	63258.3	4.965	mg/L	0.0361	24.82	mg/L	0.181	0.73%
Na 330.237†	124.9	4.729	mg/L	0.1993	23.65	mg/L	0.997	4.21%
Ni 231.604†	1353.0	0.3280	mg/L	0.00417	1.640	mg/L	0.0209	1.27%
Pb 220.353†	8229.0	1.049	mg/L	0.0041	5.247	mg/L	0.0207	0.39%
Sb 206.836†	20.8	0.00391	mg/L	0.001979	0.01956	mg/L	0.009895	50.59%
Se 196.026†	1181.7	0.7933	mg/L	0.00294	3.967	mg/L	0.0147	0.37%
Si 288.158†	2476.2	1.155	mg/L	0.0142	5.773	mg/L	0.0708	1.23%
Sn 189.927†	-51.2	-0.00910	mg/L	0.000826	-0.04549	mg/L	0.004132	9.08%
Sr 421.552†	466875.1	0.4984	mg/L	0.00421	2.492	mg/L	0.0210	0.84%
Ti 334.903†	66391.7	3.184	mg/L	0.0267	15.92	mg/L	0.133	0.84%
Tl 190.801†	1963.5	0.7764	mg/L	0.00237	3.882	mg/L	0.0119	0.31%
V 292.402†	46657.3	0.3531	mg/L	0.00355	1.766	mg/L	0.0177	1.00%
Zn 206.200†	4206.7	1.038	mg/L	0.0139	5.189	mg/L	0.0693	1.34%

Sequence No.: 20
Sample ID: ~~VR32 APOST~~ SWC 222222

Dilution: 5.000000X

Autosampler Location: 314
Date Collected: 11/16/2012 10:25:07 AM
Data Type: Original

Nebulizer Parameters: VR32 APOST SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR32 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2240449.9	99.26	%	0.413				0.42%
ScR 361.383	285107.0	99.71	%	0.715				0.72%
Ag 328.068†	84603.8	0.4789	mg/L	0.00721	2.395	mg/L	0.0360	1.51%
Al 308.215†	193242.4	108.5	mg/L	1.06	542.5	mg/L	5.29	0.98%
As 188.979†	3536.3	1.959	mg/L	0.0221	9.793	mg/L	0.1105	1.13%
B 249.677†	95.0	0.01100	mg/L	0.001130	0.05500	mg/L	0.005651	10.27%
Ba 233.527†	17289.1	3.793	mg/L	0.0334	18.97	mg/L	0.167	0.88%
Be 313.042†	307237.9	0.4618	mg/L	0.00459	2.309	mg/L	0.0230	0.99%
Ca 317.933†	428479.5	30.17	mg/L	0.279	150.8	mg/L	1.39	0.92%
Cd 228.802†	17177.9	0.5293	mg/L	0.00645	2.646	mg/L	0.0323	1.22%
Co 228.616†	19382.6	0.5419	mg/L	0.00575	2.710	mg/L	0.0287	1.06%
Cr 267.716†	3973.4	0.6399	mg/L	0.00719	3.200	mg/L	0.0359	1.12%
Cu 324.752†	150970.1	0.5845	mg/L	0.00815	2.922	mg/L	0.0408	1.39%
Fe 273.955†	141965.9	108.3	mg/L	1.57	541.4	mg/L	7.86	1.45%
K 766.490†	37840.4	18.98	mg/L	0.128	94.92	mg/L	0.640	0.67%
Mg 279.077†	51548.6	34.90	mg/L	0.369	174.5	mg/L	1.84	1.06%
Mn 257.610†	205040.2	5.668	mg/L	0.0698	28.34	mg/L	0.349	1.23%
Mo 202.031†	77.4	0.00349	mg/L	0.000575	0.01747	mg/L	0.002874	16.45%
Na 589.592†	129420.7	10.16	mg/L	0.073	50.79	mg/L	0.367	0.72%
Na 330.237†	291.3	10.41	mg/L	0.360	52.05	mg/L	1.800	3.46%
Ni 231.604†	2466.2	0.5976	mg/L	0.00539	2.988	mg/L	0.0270	0.90%
Pb 220.353†	16945.3	2.140	mg/L	0.0217	10.70	mg/L	0.108	1.01%
Sb 206.836†	31.5	0.00415	mg/L	0.002091	0.02074	mg/L	0.010456	50.42%
Se 196.026†	2830.4	1.900	mg/L	0.0200	9.502	mg/L	0.0998	1.05%
Si 288.158†	3129.4	1.460	mg/L	0.0246	7.301	mg/L	0.1232	1.69%
Sn 189.927†	-47.2	-0.00785	mg/L	0.000324	-0.03925	mg/L	0.001621	4.13%
Sr 421.552†	692965.8	0.7398	mg/L	0.00683	3.699	mg/L	0.0341	0.92%
Ti 334.903†	64649.4	3.100	mg/L	0.0325	15.50	mg/L	0.162	1.05%
Tl 190.801†	4673.1	1.834	mg/L	0.0180	9.170	mg/L	0.0901	0.98%
V 292.402†	81840.2	0.6230	mg/L	0.00817	3.115	mg/L	0.0408	1.31%
Zn 206.200†	5332.7	1.316	mg/L	0.0176	6.578	mg/L	0.0879	1.34%

Sequence No.: 21
Sample ID: VR32 L SWC

Autosampler Location: 315
Date Collected: 11/16/2012 10:28:09 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR32 L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR32 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2241870.5	99.32	%	0.252				0.25%
ScR 361.383	285688.7	99.92	%	1.744				1.75%
Ag 328.068†	-12.0	-0.00002	mg/L	0.000168	-0.00011	mg/L	0.000842	772.65%
Al 308.215†	139525.2	78.34	mg/L	0.590	391.7	mg/L	2.95	0.75%
As 188.979†	-75.9	0.07352	mg/L	0.000772	0.3676	mg/L	0.00386	1.05%
B 249.677†	128.5	0.01620	mg/L	0.000486	0.08100	mg/L	0.002431	3.00%
Ba 233.527†	16971.6	3.717	mg/L	0.0579	18.59	mg/L	0.290	1.56%
Be 313.042†	2116.0	0.00310	mg/L	0.000074	0.01550	mg/L	0.000368	2.38%
Ca 317.933†	844026.3	59.42	mg/L	0.395	297.1	mg/L	1.97	0.66%
Cd 228.802†	1625.6	0.05046	mg/L	0.000104	0.2523	mg/L	0.00052	0.21%
Co 228.616†	3466.7	0.08816	mg/L	0.000305	0.4408	mg/L	0.00152	0.35%
Cr 267.716†	2334.7	0.3760	mg/L	0.00494	1.880	mg/L	0.0247	1.31%
Cu 324.752†	53505.1	0.2109	mg/L	0.00025	1.055	mg/L	0.0012	0.12%
Fe 273.955†	189271.1	144.4	mg/L	1.06	721.8	mg/L	5.32	0.74%
K 766.490†	34203.1	17.16	mg/L	0.203	85.80	mg/L	1.015	1.18%
Mg 279.077†	69358.3	46.96	mg/L	0.334	234.8	mg/L	1.67	0.71%
Mn 257.610†	348969.7	9.646	mg/L	0.0702	48.23	mg/L	0.351	0.73%
Mo 202.031†	112.8	0.00496	mg/L	0.000375	0.02480	mg/L	0.001876	7.56%
Na 589.592†	4771.3	0.3745	mg/L	0.00153	1.872	mg/L	0.0077	0.41%
Na 330.237†	-12.2	-0.3171	mg/L	0.04777	-1.585	mg/L	0.2388	15.06%
Ni 231.604†	1172.3	0.2845	mg/L	0.00603	1.422	mg/L	0.0301	2.12%
Pb 220.353†	15280.2	1.923	mg/L	0.0086	9.615	mg/L	0.0428	0.45%
Sb 206.836†	44.7	0.01057	mg/L	0.001086	0.05284	mg/L	0.005430	10.28%
Se 196.026†	13.0	0.00859	mg/L	0.001729	0.04296	mg/L	0.008646	20.13%
Si 288.158†	2138.7	0.9996	mg/L	0.01572	4.998	mg/L	0.0786	1.57%
Sn 189.927†	-41.2	-0.00256	mg/L	0.001223	-0.01278	mg/L	0.006116	47.86%
Sr 421.552†	467519.9	0.4991	mg/L	0.00294	2.495	mg/L	0.0147	0.59%
Ti 334.903†	85682.3	4.108	mg/L	0.0274	20.54	mg/L	0.137	0.67%
Tl 190.801†	-21.3	0.00588	mg/L	0.001727	0.02939	mg/L	0.008636	29.39%
V 292.402†	21033.7	0.1563	mg/L	0.00043	0.7817	mg/L	0.00217	0.28%
Zn 206.200†	10204.8	2.517	mg/L	0.0419	12.59	mg/L	0.209	1.66%

Sequence No.: 22
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 11/16/2012 10:32:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2199777.5	97.46	%	0.705				0.72%
ScR 361.383	274493.3	96.00	%	0.742				0.77%
Ag 328.068†	178100.1	1.008	mg/L	0.0097	1.008	mg/L	0.0097	0.96%
Al 308.215†	3790.5	2.093	mg/L	0.0278	2.093	mg/L	0.0278	1.33%
As 188.979†	3762.9	2.019	mg/L	0.0205	2.019	mg/L	0.0205	1.02%
B 249.677†	7776.1	0.9915	mg/L	0.01126	0.9915	mg/L	0.01126	1.14%
Ba 233.527†	4903.7	1.080	mg/L	0.0061	1.080	mg/L	0.0061	0.56%
Be 313.042†	645145.2	0.9699	mg/L	0.00944	0.9699	mg/L	0.00944	0.97%
Ca 317.933†	30184.6	2.125	mg/L	0.0195	2.125	mg/L	0.0195	0.92%
Cd 228.802†	33947.8	1.059	mg/L	0.0092	1.059	mg/L	0.0092	0.87%
Co 228.616†	37015.0	1.048	mg/L	0.0100	1.048	mg/L	0.0100	0.96%
Cr 267.716†	6578.2	1.059	mg/L	0.0094	1.059	mg/L	0.0094	0.89%
Cu 324.752†	268679.8	1.033	mg/L	0.0088	1.033	mg/L	0.0088	0.86%
Fe 273.955†	2814.0	2.139	mg/L	0.0124	2.139	mg/L	0.0124	0.58%
K 766.490†	40847.1	20.49	mg/L	0.188	20.49	mg/L	0.188	0.92%
Mg 279.077†	3093.4	2.105	mg/L	0.0124	2.105	mg/L	0.0124	0.59%
Mn 257.610†	38361.5	1.061	mg/L	0.0078	1.061	mg/L	0.0078	0.74%
Mo 202.031†	21127.2	1.053	mg/L	0.0082	1.053	mg/L	0.0082	0.78%
Na 589.592†	642349.7	50.42	mg/L	0.471	50.42	mg/L	0.471	0.93%
Na 330.237†	1524.0	52.94	mg/L	0.456	52.94	mg/L	0.456	0.86%
Ni 231.604†	4177.2	1.014	mg/L	0.0029	1.014	mg/L	0.0029	0.28%
Pb 220.353†	16450.2	2.057	mg/L	0.0166	2.057	mg/L	0.0166	0.81%
Sb 206.836†	7107.8	2.173	mg/L	0.0140	2.173	mg/L	0.0140	0.65%
Se 196.026†	2936.4	1.971	mg/L	0.0130	1.971	mg/L	0.0130	0.66%
Si 288.158†	4642.4	2.156	mg/L	0.0147	2.156	mg/L	0.0147	0.68%
Sn 189.927†	4022.3	1.033	mg/L	0.0084	1.033	mg/L	0.0084	0.81%
Sr 421.552†	918881.6	0.9809	mg/L	0.00872	0.9809	mg/L	0.00872	0.89%
Ti 334.903†	22717.1	1.089	mg/L	0.0084	1.089	mg/L	0.0084	0.77%
Tl 190.801†	5145.8	2.004	mg/L	0.0115	2.004	mg/L	0.0115	0.58%
V 292.402†	135813.7	1.042	mg/L	0.0100	1.042	mg/L	0.0100	0.96%
Zn 206.200†	4227.3	1.043	mg/L	0.0107	1.043	mg/L	0.0107	1.03%

Sequence No.: 23
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 11/16/2012 10:36:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206241.1	97.74	%	1.512				1.55%
ScR 361.383	279930.4	97.90	%	1.042				1.06%
Ag 328.068†	69.2	0.00039	mg/L	0.000225	0.00039	mg/L	0.000225	57.53%
Al 308.215†	25.2	0.01412	mg/L	0.005460	0.01412	mg/L	0.005460	38.66%
As 188.979†	-2.9	-0.00153	mg/L	0.001874	-0.00153	mg/L	0.001874	122.61%
B 249.677†	11.8	0.00150	mg/L	0.000435	0.00150	mg/L	0.000435	28.95%
Ba 233.527†	2.1	0.00047	mg/L	0.001240	0.00047	mg/L	0.001240	264.99%
Be 313.042†	90.2	0.00014	mg/L	0.000045	0.00014	mg/L	0.000045	33.08%
Ca 317.933†	35.1	0.00247	mg/L	0.000666	0.00247	mg/L	0.000666	26.95%
Cd 228.802†	-8.8	-0.00027	mg/L	0.000119	-0.00027	mg/L	0.000119	44.28%
Co 228.616†	-19.3	-0.00055	mg/L	0.000083	-0.00055	mg/L	0.000083	15.04%
Cr 267.716†	-11.8	-0.00189	mg/L	0.000839	-0.00189	mg/L	0.000839	44.28%
Cu 324.752†	94.2	0.00036	mg/L	0.000074	0.00036	mg/L	0.000074	20.57%
Fe 273.955†	12.2	0.00929	mg/L	0.000626	0.00929	mg/L	0.000626	6.74%
K 766.490†	45.5	0.02285	mg/L	0.005779	0.02285	mg/L	0.005779	25.29%
Mg 279.077†	3.7	0.00253	mg/L	0.002254	0.00253	mg/L	0.002254	89.20%
Mn 257.610†	8.3	0.00023	mg/L	0.000162	0.00023	mg/L	0.000162	70.97%
Mo 202.031†	15.5	0.00077	mg/L	0.000227	0.00077	mg/L	0.000227	29.42%
Na 589.592†	23.5	0.00185	mg/L	0.002659	0.00185	mg/L	0.002659	144.05%
Na 330.237†	-14.7	-0.5103	mg/L	0.40102	-0.5103	mg/L	0.40102	78.58%
Ni 231.604†	-4.0	-0.00097	mg/L	0.002039	-0.00097	mg/L	0.002039	209.61%
Pb 220.353†	5.6	0.00070	mg/L	0.000472	0.00070	mg/L	0.000472	67.95%
Sb 206.836†	2.4	0.00076	mg/L	0.000608	0.00076	mg/L	0.000608	79.94%
Se 196.026†	0.9	0.00059	mg/L	0.003326	0.00059	mg/L	0.003326	561.48%
Si 288.158†	6.2	0.00288	mg/L	0.000784	0.00288	mg/L	0.000784	27.20%
Sn 189.927†	-1.1	-0.00028	mg/L	0.000451	-0.00028	mg/L	0.000451	159.08%
Sr 421.552†	87.2	0.00009	mg/L	0.000020	0.00009	mg/L	0.000020	21.73%
Ti 334.903†	14.1	0.00067	mg/L	0.000930	0.00067	mg/L	0.000930	137.81%
Tl 190.801†	-5.1	-0.00200	mg/L	0.002356	-0.00200	mg/L	0.002356	117.68%
V 292.402†	-37.1	-0.00029	mg/L	0.000145	-0.00029	mg/L	0.000145	49.85%
Zn 206.200†	-0.5	-0.00011	mg/L	0.000531	-0.00011	mg/L	0.000531	470.95%

Sequence No.: 24
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 10:40:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2194544.8	97.22	%	0.185				0.19%
ScR 361.383	278645.3	97.45	%	2.509				2.57%
Ag 328.068†	560.6	0.00317	mg/L	0.000037	0.00317	mg/L	0.000037	1.18%
Al 308.215†	106.1	0.05946	mg/L	0.003665	0.05946	mg/L	0.003665	6.16%
As 188.979†	94.2	0.05001	mg/L	0.001108	0.05001	mg/L	0.001108	2.22%
B 249.677†	162.9	0.02079	mg/L	0.000428	0.02079	mg/L	0.000428	2.06%
Ba 233.527†	13.3	0.00293	mg/L	0.000685	0.00293	mg/L	0.000685	23.41%
Be 313.042†	661.0	0.00099	mg/L	0.000074	0.00099	mg/L	0.000074	7.48%
Ca 317.933†	717.9	0.05054	mg/L	0.001905	0.05054	mg/L	0.001905	3.77%
Cd 228.802†	73.4	0.00199	mg/L	0.000087	0.00199	mg/L	0.000087	4.35%
Co 228.616†	105.9	0.00299	mg/L	0.000215	0.00299	mg/L	0.000215	7.20%
Cr 267.716†	26.0	0.00418	mg/L	0.000596	0.00418	mg/L	0.000596	14.26%
Cu 324.752†	648.9	0.00249	mg/L	0.000130	0.00249	mg/L	0.000130	5.23%
Fe 273.955†	75.6	0.05763	mg/L	0.001077	0.05763	mg/L	0.001077	1.87%
K 766.490†	1009.0	0.5062	mg/L	0.02489	0.5062	mg/L	0.02489	4.92%
Mg 279.077†	85.7	0.05812	mg/L	0.005315	0.05812	mg/L	0.005315	9.14%
Mn 257.610†	38.2	0.00106	mg/L	0.000107	0.00106	mg/L	0.000107	10.13%
Mo 202.031†	110.8	0.00552	mg/L	0.000073	0.00552	mg/L	0.000073	1.33%
Na 589.592†	6061.9	0.4758	mg/L	0.01122	0.4758	mg/L	0.01122	2.36%
Na 330.237†	2.4	0.08126	mg/L	0.354596	0.08126	mg/L	0.354596	436.35%
Ni 231.604†	35.0	0.00851	mg/L	0.001515	0.00851	mg/L	0.001515	17.80%
Pb 220.353†	174.9	0.02188	mg/L	0.001641	0.02188	mg/L	0.001641	7.50%
Sb 206.836†	178.5	0.05463	mg/L	0.001245	0.05463	mg/L	0.001245	2.28%
Se 196.026†	78.7	0.05284	mg/L	0.001904	0.05284	mg/L	0.001904	3.60%
Si 288.158†	137.1	0.06368	mg/L	0.004790	0.06368	mg/L	0.004790	7.52%
Sn 189.927†	37.3	0.00959	mg/L	0.001111	0.00959	mg/L	0.001111	11.58%
Sr 421.552†	906.3	0.00097	mg/L	0.000053	0.00097	mg/L	0.000053	5.49%
Ti 334.903†	111.6	0.00535	mg/L	0.000277	0.00535	mg/L	0.000277	5.19%
Tl 190.801†	124.3	0.04859	mg/L	0.000928	0.04859	mg/L	0.000928	1.91%
V 292.402†	385.7	0.00296	mg/L	0.000145	0.00296	mg/L	0.000145	4.89%
Zn 206.200†	36.9	0.00910	mg/L	0.000445	0.00910	mg/L	0.000445	4.89%

Sequence No.: 25
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 10:44:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2156626.1	95.54	%	0.438				0.46%
ScR 361.383	275282.3	96.28	%	0.489				0.51%
Ag 328.068†	-133.3	-0.00075	mg/L	0.000224	-0.00075	mg/L	0.000224	29.82%
Al 308.215†	362630.4	203.6	mg/L	0.14	203.6	mg/L	0.14	0.07%
As 188.979†	40.6	0.01576	mg/L	0.002516	0.01576	mg/L	0.002516	15.96%
B 249.677†	-21.0	-0.00267	mg/L	0.001853	-0.00267	mg/L	0.001853	69.29%
Ba 233.527†	139.9	-0.00162	mg/L	0.000210	-0.00162	mg/L	0.000210	12.94%
Be 313.042†	105.0	0.00016	mg/L	0.000030	0.00016	mg/L	0.000030	19.59%
Ca 317.933†	1446737.6	101.9	mg/L	0.16	101.9	mg/L	0.16	0.16%
Cd 228.802†	57.8	-0.00020	mg/L	0.000157	-0.00020	mg/L	0.000157	77.33%
Co 228.616†	61.5	-0.00085	mg/L	0.000230	-0.00085	mg/L	0.000230	27.00%
Cr 267.716†	4.8	-0.00151	mg/L	0.000889	-0.00151	mg/L	0.000889	59.09%
Cu 324.752†	-1974.4	0.00028	mg/L	0.000072	0.00028	mg/L	0.000072	25.63%
Fe 273.955†	259991.2	198.3	mg/L	0.35	198.3	mg/L	0.35	0.18%
K 766.490†	28.7	0.01438	mg/L	0.006419	0.01438	mg/L	0.006419	44.65%
Mg 279.077†	155846.5	105.6	mg/L	1.66	105.6	mg/L	1.66	1.58%
Mn 257.610†	27.6	0.00071	mg/L	0.000181	0.00071	mg/L	0.000181	25.37%
Mo 202.031†	57.5	0.00176	mg/L	0.000165	0.00176	mg/L	0.000165	9.33%
Na 589.592†	130.5	0.01024	mg/L	0.003638	0.01024	mg/L	0.003638	35.52%
Na 330.237†	-22.3	-0.7765	mg/L	0.13838	-0.7765	mg/L	0.13838	17.82%
Ni 231.604†	1.7	0.00042	mg/L	0.000176	0.00042	mg/L	0.000176	41.49%
Pb 220.353†	-316.5	0.00102	mg/L	0.001663	0.00102	mg/L	0.001663	163.24%
Sb 206.836†	26.8	0.00802	mg/L	0.001448	0.00802	mg/L	0.001448	18.05%
Se 196.026†	26.0	0.01742	mg/L	0.002816	0.01742	mg/L	0.002816	16.16%
Si 288.158†	-30.5	-0.00138	mg/L	0.003712	-0.00138	mg/L	0.003712	269.65%
Sn 189.927†	-83.0	-0.00869	mg/L	0.000514	-0.00869	mg/L	0.000514	5.92%
Sr 421.552†	3638.9	0.00388	mg/L	Conf. 0.000074	0.00388	mg/L	0.000074	1.91%
Ti 334.903†	152.2	0.00244	mg/L	0.000552	0.00244	mg/L	0.000552	22.63%
Tl 190.801†	-64.7	-0.00413	mg/L	0.003476	-0.00413	mg/L	0.003476	84.06%
V 292.402†	1405.4	0.00380	mg/L	0.000376	0.00380	mg/L	0.000376	9.90%
Zn 206.200†	16.7	0.00412	mg/L	0.000579	0.00412	mg/L	0.000579	14.04%

Sequence No.: 26
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 10:49:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2227176.1	98.67	%	0.400				0.41%
ScR 361.383	275651.0	96.41	%	1.436				1.49%
Ag 328.068†	176615.4	0.9997	mg/L	0.00274	0.9997	mg/L	0.00274	0.27%
Al 308.215†	359661.8	201.9	mg/L	1.47	201.9	mg/L	1.47	0.73%
As 188.979†	1911.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.76%
B 249.677†	-9.7	-0.00334	mg/L	0.000583	-0.00334	mg/L	0.000583	17.45%
Ba 233.527†	4975.4	1.064	mg/L	0.0122	1.064	mg/L	0.0122	1.15%
Be 313.042†	649735.1	0.9768	mg/L	0.00231	0.9768	mg/L	0.00231	0.24%
Ca 317.933†	1451145.2	102.2	mg/L	0.29	102.2	mg/L	0.29	0.29%
Cd 228.802†	33114.8	1.037	mg/L	0.0054	1.037	mg/L	0.0054	0.52%
Co 228.616†	36106.3	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Cr 267.716†	6579.8	1.057	mg/L	0.0142	1.057	mg/L	0.0142	1.34%
Cu 324.752†	266365.5	1.032	mg/L	0.0050	1.032	mg/L	0.0050	0.48%
Fe 273.955†	260344.1	198.6	mg/L	1.06	198.6	mg/L	1.06	0.53%
K 766.490†	-16.3	-0.00817	mg/L	0.016399	-0.00817	mg/L	0.016399	200.84%
Mg 279.077†	150792.3	102.2	mg/L	0.48	102.2	mg/L	0.48	0.47%
Mn 257.610†	35986.7	0.9948	mg/L	0.00461	0.9948	mg/L	0.00461	0.46%
Mo 202.031†	47.2	0.00119	mg/L	0.000498	0.00119	mg/L	0.000498	41.79%
Na 589.592†	342.5	0.02688	mg/L	0.000553	0.02688	mg/L	0.000553	2.06%
Na 330.237†	-16.2	-0.8821	mg/L	0.10893	-0.8821	mg/L	0.10893	12.35%
Ni 231.604†	4063.8	0.9862	mg/L	0.01456	0.9862	mg/L	0.01456	1.48%
Pb 220.353†	7570.0	0.9869	mg/L	0.00426	0.9869	mg/L	0.00426	0.43%
Sb 206.836†	3433.5	1.039	mg/L	0.0012	1.039	mg/L	0.0012	0.11%
Se 196.026†	1486.3	0.9972	mg/L	0.00585	0.9972	mg/L	0.00585	0.59%
Si 288.158†	-34.5	0.00013	mg/L	0.001803	0.00013	mg/L	0.001803	>999.9%
Sn 189.927†	-87.2	-0.00923	mg/L	0.001031	-0.00923	mg/L	0.001031	11.18%
Sr 421.552†	3649.2	0.00390	mg/L	Conf. 0.000081	0.00390	mg/L	0.000081	2.08%
Ti 334.903†	150.9	0.00215	mg/L	0.000192	0.00215	mg/L	0.000192	8.90%
Tl 190.801†	2366.3	0.9373	mg/L	0.00224	0.9373	mg/L	0.00224	0.24%
V 292.402†	130937.5	0.9976	mg/L	0.00376	0.9976	mg/L	0.00376	0.38%
Zn 206.200†	3934.0	0.9704	mg/L	0.01123	0.9704	mg/L	0.01123	1.16%

Sequence No.: 27
Sample ID: CV 4
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 10:52:58 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2245873.8	99.50	%	0.811				0.82%
ScR 361.383	283315.6	99.09	%	0.306				0.31%
Ag 328.068†	174930.5	0.9902	mg/L	0.00619	0.9902	mg/L	0.00619	0.62%
Al 308.215†	3773.8	2.084	mg/L	0.0143	2.084	mg/L	0.0143	0.69%
As 188.979†	3729.4	1.999	mg/L	0.0206	1.999	mg/L	0.0206	1.03%
B 249.677†	7658.5	0.9765	mg/L	0.00295	0.9765	mg/L	0.00295	0.30%
Ba 233.527†	4847.2	1.068	mg/L	0.0052	1.068	mg/L	0.0052	0.49%
Be 313.042†	638772.9	0.9603	mg/L	0.00684	0.9603	mg/L	0.00684	0.71%
Ca 317.933†	28806.7	2.028	mg/L	0.0119	2.028	mg/L	0.0119	0.59%
Cd 228.802†	33460.4	1.044	mg/L	0.0067	1.044	mg/L	0.0067	0.64%
Co 228.616†	36612.0	1.036	mg/L	0.0038	1.036	mg/L	0.0038	0.37%
Cr 267.716†	6557.1	1.055	mg/L	0.0055	1.055	mg/L	0.0055	0.52%
Cu 324.752†	262464.5	1.009	mg/L	0.0050	1.009	mg/L	0.0050	0.50%
Fe 273.955†	2800.1	2.129	mg/L	0.0222	2.129	mg/L	0.0222	1.04%
K 766.490†	40043.1	20.09	mg/L	0.077	20.09	mg/L	0.077	0.38%
Mg 279.077†	3104.6	2.113	mg/L	0.0057	2.113	mg/L	0.0057	0.27%
Mn 257.610†	36428.0	1.007	mg/L	0.0046	1.007	mg/L	0.0046	0.46%
Mo 202.031†	20878.4	1.040	mg/L	0.0100	1.040	mg/L	0.0100	0.96%
Na 589.592†	624581.9	49.02	mg/L	0.298	49.02	mg/L	0.298	0.61%
Na 330.237†	1498.3	52.03	mg/L	0.230	52.03	mg/L	0.230	0.44%
Ni 231.604†	4145.1	1.006	mg/L	0.0047	1.006	mg/L	0.0047	0.46%
Pb 220.353†	16296.0	2.038	mg/L	0.0172	2.038	mg/L	0.0172	0.84%
Sb 206.836†	7007.4	2.142	mg/L	0.0215	2.142	mg/L	0.0215	1.00%
Se 196.026†	2913.8	1.956	mg/L	0.0143	1.956	mg/L	0.0143	0.73%
Si 288.158†	4550.0	2.113	mg/L	0.0054	2.113	mg/L	0.0054	0.26%
Sn 189.927†	3981.5	1.023	mg/L	0.0089	1.023	mg/L	0.0089	0.87%
Sr 421.552†	897817.7	0.9584	mg/L	0.00657	0.9584	mg/L	0.00657	0.69%
Ti 334.903†	21436.6	1.027	mg/L	0.0065	1.027	mg/L	0.0065	0.64%
Tl 190.801†	5089.8	1.982	mg/L	0.0182	1.982	mg/L	0.0182	0.92%
V 292.402†	133864.0	1.027	mg/L	0.0060	1.027	mg/L	0.0060	0.59%
Zn 206.200†	4224.6	1.042	mg/L	0.0062	1.042	mg/L	0.0062	0.60%

Sequence No.: 28
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 11/16/2012 10:57:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2282848.4	101.1	%	0.71				0.70%
ScR 361.383	289522.5	101.3	%	0.80				0.79%
Ag 328.068†	49.8	0.00028	mg/L	0.000263	0.00028	mg/L	0.000263	93.38%
Al 308.215†	26.0	0.01462	mg/L	0.000506	0.01462	mg/L	0.000506	3.46%
As 188.979†	0.9	0.00048	mg/L	0.001711	0.00048	mg/L	0.001711	356.99%
B 249.677†	16.0	0.00204	mg/L	0.000799	0.00204	mg/L	0.000799	39.18%
Ba 233.527†	-1.9	-0.00043	mg/L	0.000450	-0.00043	mg/L	0.000450	105.66%
Be 313.042†	122.5	0.00018	mg/L	0.000019	0.00018	mg/L	0.000019	10.37%
Ca 317.933†	75.1	0.00529	mg/L	0.000179	0.00529	mg/L	0.000179	3.38%
Cd 228.802†	-8.7	-0.00028	mg/L	0.000156	-0.00028	mg/L	0.000156	56.20%
Co 228.616†	-11.3	-0.00032	mg/L	0.000035	-0.00032	mg/L	0.000035	10.98%
Cr 267.716†	-7.4	-0.00119	mg/L	0.000597	-0.00119	mg/L	0.000597	50.09%
Cu 324.752†	104.1	0.00040	mg/L	0.000121	0.00040	mg/L	0.000121	30.32%
Fe 273.955†	15.4	0.01178	mg/L	0.000655	0.01178	mg/L	0.000655	5.56%
K 766.490†	-4.7	-0.00236	mg/L	0.024789	-0.00236	mg/L	0.024789	>999.9%
Mg 279.077†	8.8	0.00600	mg/L	0.002743	0.00600	mg/L	0.002743	45.75%
Mn 257.610†	-0.4	-0.00001	mg/L	0.000105	-0.00001	mg/L	0.000105	867.35%
Mo 202.031†	9.7	0.00048	mg/L	0.000181	0.00048	mg/L	0.000181	37.62%
Na 589.592†	74.7	0.00586	mg/L	0.004456	0.00586	mg/L	0.004456	75.99%
Na 330.237†	-10.4	-0.3604	mg/L	0.24897	-0.3604	mg/L	0.24897	69.08%
Ni 231.604†	-2.7	-0.00066	mg/L	0.001049	-0.00066	mg/L	0.001049	159.46%
Pb 220.353†	8.2	0.00103	mg/L	0.000615	0.00103	mg/L	0.000615	59.87%
Sb 206.836†	6.2	0.00191	mg/L	0.001988	0.00191	mg/L	0.001988	103.96%
Se 196.026†	3.5	0.00238	mg/L	0.002705	0.00238	mg/L	0.002705	113.63%
Si 288.158†	-1.8	-0.00082	mg/L	0.004960	-0.00082	mg/L	0.004960	607.93%
Sn 189.927†	-3.7	-0.00095	mg/L	0.001088	-0.00095	mg/L	0.001088	114.08%
Sr 421.552†	128.0	0.00014	mg/L	0.000012	0.00014	mg/L	0.000012	8.70%
Ti 334.903†	15.5	0.00074	mg/L	0.000522	0.00074	mg/L	0.000522	70.17%
Tl 190.801†	1.3	0.00053	mg/L	0.000746	0.00053	mg/L	0.000746	141.10%
V 292.402†	-16.6	-0.00013	mg/L	0.000098	-0.00013	mg/L	0.000098	74.03%
Zn 206.200†	-0.3	-0.00008	mg/L	0.000713	-0.00008	mg/L	0.000713	853.61%

Sequence No.: 29
Sample ID: VR34 MB1 SWC

Dilution: 2.000000X

Autosampler Location: 316
Date Collected: 11/16/2012 11:02:07 AM
Data Type: Original

Nebulizer Parameters: VR34 MB1 SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VR34 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2310649.3	102.4	%	0.51				0.50%
ScR 361.383	289706.0	101.3	%	0.63				0.62%
Ag 328.068†	40.0	0.00023	mg/L	0.000206	0.00045	mg/L	0.000413	91.13%
Al 308.215†	18.8	0.01055	mg/L	0.010958	0.02110	mg/L	0.021916	103.87%
As 188.979†	-0.9	-0.00045	mg/L	0.002683	-0.00090	mg/L	0.005365	592.86%
B 249.677†	1.3	0.00017	mg/L	0.000338	0.00034	mg/L	0.000676	196.30%
Ba 233.527†	-3.3	-0.00073	mg/L	0.000325	-0.00146	mg/L	0.000649	44.43%
Be 313.042†	35.0	0.00005	mg/L	0.000022	0.00011	mg/L	0.000045	42.33%
Ca 317.933†	185.3	0.01305	mg/L	0.001109	0.02609	mg/L	0.002218	8.50%
Cd 228.802†	-9.8	-0.00031	mg/L	0.000190	-0.00061	mg/L	0.000380	61.86%
Co 228.616†	-15.3	-0.00043	mg/L	0.000113	-0.00087	mg/L	0.000226	26.06%
Cr 267.716†	-9.3	-0.00150	mg/L	0.000438	-0.00299	mg/L	0.000877	29.29%
Cu 324.752†	167.1	0.00064	mg/L	0.000077	0.00129	mg/L	0.000153	11.92%
Fe 273.955†	14.1	0.01074	mg/L	0.000295	0.02147	mg/L	0.000590	2.75%
K 766.490†	17.9	0.00898	mg/L	0.010027	0.01796	mg/L	0.020055	111.63%
Mg 279.077†	9.2	0.00624	mg/L	0.001872	0.01248	mg/L	0.003745	30.01%
Mn 257.610†	9.4	0.00026	mg/L	0.000120	0.00052	mg/L	0.000239	45.91%
Mo 202.031†	-1.0	-0.00005	mg/L	0.000194	-0.00010	mg/L	0.000387	396.73%
Na 589.592†	38.2	0.00300	mg/L	0.002060	0.00600	mg/L	0.004120	68.68%
Na 330.237†	-14.9	-0.5194	mg/L	0.57413	-1.039	mg/L	1.1483	110.54%
Ni 231.604†	-4.3	-0.00104	mg/L	0.000643	-0.00208	mg/L	0.001286	61.86%
Pb 220.353†	-0.4	-0.00005	mg/L	0.000334	-0.00009	mg/L	0.000669	721.84%
Sb 206.836†	0.6	0.00020	mg/L	0.000993	0.00040	mg/L	0.001986	496.76%
Se 196.026†	7.9	0.00528	mg/L	0.001984	0.01057	mg/L	0.003968	37.55%
Si 288.158†	1.4	0.00064	mg/L	0.002035	0.00127	mg/L	0.004070	320.47%
Sn 189.927†	-4.9	-0.00127	mg/L	0.000565	-0.00253	mg/L	0.001130	44.58%
Sr 421.552†	28.0	0.00003	mg/L	0.000036	0.00006	mg/L	0.000072	119.90%
Ti 334.903†	1.3	0.00006	mg/L	0.000854	0.00013	mg/L	0.001708	>999.9%
Tl 190.801†	1.2	0.00048	mg/L	0.000978	0.00096	mg/L	0.001957	203.76%
V 292.402†	-39.2	-0.00031	mg/L	0.000169	-0.00061	mg/L	0.000338	55.28%
Zn 206.200†	21.8	0.00537	mg/L	0.000207	0.01074	mg/L	0.000415	3.86%

Sequence No.: 30
Sample ID: VR34 B SWC

Dilution: 5.000000X

Del

Autosampler Location: 317
Date Collected: 11/16/2012 11:06:24 AM
Data Type: Original

Nebulizer Parameters: VR34 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2298846.2	101.8	%	0.36				0.35%
ScR 361.383	297106.6	103.9	%	3.06				2.94%
Ag 328.068†	-47.8	-0.00022	mg/L	0.000217	-0.00112	mg/L	0.001085	97.21%
Al 308.215†	133538.1	74.98	mg/L	2.437	374.9	mg/L	12.18	3.25%
As 188.979†	-64.6	0.05467	mg/L	0.004329	0.2733	mg/L	0.02165	7.92%
B 249.677†	87.3	0.01104	mg/L	0.001116	0.05521	mg/L	0.005579	10.10%
Ba 233.527†	7179.2	1.568	mg/L	0.0517	7.838	mg/L	0.2586	3.30%
Be 313.042†	1570.3	0.00229	mg/L	0.000113	0.01145	mg/L	0.000564	4.93%
Ca 317.933†	404790.3	28.50	mg/L	0.889	142.5	mg/L	4.45	3.12%
Cd 228.802†	764.7	0.02362	mg/L	0.000122	0.1181	mg/L	0.00061	0.52%
Co 228.616†	1862.3	0.04536	mg/L	0.000135	0.2268	mg/L	0.00068	0.30%
Cr 267.716†	1610.8	0.2594	mg/L	0.00766	1.297	mg/L	0.0383	2.95%
Cu 324.752†	25996.6	0.1031	mg/L	0.00039	0.5153	mg/L	0.00194	0.38%
Fe 273.955†	118848.3	90.64	mg/L	3.213	453.2	mg/L	16.07	3.54%
K 766.490†	15395.4	7.724	mg/L	0.2657	38.62	mg/L	1.329	3.44%
Mg 279.077†	47164.6	31.94	mg/L	1.090	159.7	mg/L	5.45	3.41%
Mn 257.610†	171224.4	4.733	mg/L	0.1604	23.66	mg/L	0.802	3.39%
Mo 202.031†	65.3	0.00293	mg/L	0.000460	0.01466	mg/L	0.002302	15.70%
Na 589.592†	7841.2	0.6154	mg/L	0.01745	3.077	mg/L	0.0873	2.84%
Na 330.237†	-6.8	0.1393	mg/L	0.07590	0.6963	mg/L	0.37951	54.50%
Ni 231.604†	564.7	0.1370	mg/L	0.00504	0.6851	mg/L	0.02522	3.68%
Pb 220.353†	8738.2	1.107	mg/L	0.0031	5.533	mg/L	0.0157	0.28%
Sb 206.836†	30.7	0.00758	mg/L	0.001313	0.03790	mg/L	0.006566	17.32%
Se 196.026†	10.3	0.00683	mg/L	0.003294	0.03415	mg/L	0.016472	48.23%
Si 288.158†	2561.5	1.194	mg/L	0.0353	5.970	mg/L	0.1764	2.96%
Sn 189.927†	-30.6	-0.00382	mg/L	0.000754	-0.01912	mg/L	0.003769	19.72%
Sr 421.552†	258929.8	0.2764	mg/L	0.00879	1.382	mg/L	0.0439	3.18%
Ti 334.903†	66167.1	3.173	mg/L	0.1042	15.87	mg/L	0.521	3.28%
Tl 190.801†	-13.6	0.00343	mg/L	0.002413	0.01716	mg/L	0.012066	70.32%
V 292.402†	21335.9	0.1598	mg/L	0.00065	0.7990	mg/L	0.00327	0.41%
Zn 206.200†	4250.9	1.049	mg/L	0.0307	5.243	mg/L	0.1537	2.93%

Sequence No.: 31
Sample ID: VR34 C SWC

Dilution: 5.000000X

Del

Autosampler Location: 318
Date Collected: 11/16/2012 11:10:25 AM
Data Type: Original

Nebulizer Parameters: VR34 C SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR34 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263145.3	100.3	%	0.61				0.61%
ScR 361.383	286349.3	100.1	%	1.33				1.33%
Ag 328.068†	-60.6	-0.00031	mg/L	0.000047	-0.00157	mg/L	0.000237	15.08%
Al 308.215†	102093.7	57.32	mg/L	1.015	286.6	mg/L	5.07	1.77%
As 188.979†	-15.4	0.05660	mg/L	0.001745	0.2830	mg/L	0.00872	3.08%
B 249.677†	65.6	0.00830	mg/L	0.000493	0.04151	mg/L	0.002464	5.94%
Ba 233.527†	3543.0	0.7707	mg/L	0.00464	3.853	mg/L	0.0232	0.60%
Be 313.042†	1343.6	0.00197	mg/L	0.000053	0.00986	mg/L	0.000266	2.70%
Ca 317.933†	286302.1	20.16	mg/L	0.421	100.8	mg/L	2.10	2.09%
Cd 228.802†	582.7	0.01790	mg/L	0.000375	0.08948	mg/L	0.001874	2.09%
Co 228.616†	1145.0	0.02713	mg/L	0.000280	0.1356	mg/L	0.00140	1.03%
Cr 267.716†	393.6	0.06419	mg/L	0.002247	0.3209	mg/L	0.01123	3.50%
Cu 324.752†	19791.0	0.07831	mg/L	0.001071	0.3915	mg/L	0.00535	1.37%
Fe 273.955†	82692.9	63.07	mg/L	1.280	315.3	mg/L	6.40	2.03%
K 766.490†	11154.7	5.596	mg/L	0.0855	27.98	mg/L	0.428	1.53%
Mg 279.077†	20253.7	13.70	mg/L	0.272	68.51	mg/L	1.361	1.99%
Mn 257.610†	91212.1	2.521	mg/L	0.0521	12.61	mg/L	0.260	2.07%
Mo 202.031†	47.9	0.00217	mg/L	0.000325	0.01083	mg/L	0.001626	15.01%
Na 589.592†	8740.4	0.6860	mg/L	0.01165	3.430	mg/L	0.0582	1.70%
Na 330.237†	-10.9	-0.1393	mg/L	0.07390	-0.6963	mg/L	0.36950	53.07%
Ni 231.604†	250.1	0.06069	mg/L	0.001143	0.3034	mg/L	0.00571	1.88%
Pb 220.353†	4584.1	0.5841	mg/L	0.00808	2.920	mg/L	0.0404	1.38%
Sb 206.836†	15.5	0.00516	mg/L	0.000719	0.02582	mg/L	0.003596	13.92%
Se 196.026†	9.6	0.00637	mg/L	0.003199	0.03187	mg/L	0.015993	50.18%
Si 288.158†	1904.1	0.8864	mg/L	0.01336	4.432	mg/L	0.0668	1.51%
Sn 189.927†	-26.9	-0.00406	mg/L	0.001584	-0.02032	mg/L	0.007918	38.96%
Sr 421.552†	236228.8	0.2522	mg/L	0.00475	1.261	mg/L	0.0238	1.88%
Ti 334.903†	48033.7	2.304	mg/L	0.0440	11.52	mg/L	0.220	1.91%
Tl 190.801†	-11.8	0.00157	mg/L	0.000781	0.00786	mg/L	0.003905	49.71%
V 292.402†	13097.8	0.09717	mg/L	0.000983	0.4858	mg/L	0.00491	1.01%
Zn 206.200†	3493.1	0.8617	mg/L	0.00902	4.308	mg/L	0.0451	1.05%

Sequence No.: 32
Sample ID: VR34 D SWC

Dilution: 5.000000X

Autosampler Location: 319
Date Collected: 11/16/2012 11:14:26 AM
Data Type: Original

Nebulizer Parameters: VR34 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2228209.8	98.72	%	0.163				0.17%
ScR 361.383	285645.4	99.90	%	2.075				2.08%
Ag 328.068†	-7.4	-0.00000	mg/L	0.000185	-0.00001	mg/L	0.000926	>999.9%
Al 308.215†	111590.5	62.65	mg/L	1.506	313.3	mg/L	7.53	2.40%
As 188.979†	-13.1	0.07898	mg/L	0.002193	0.3949	mg/L	0.01097	2.78%
B 249.677†	90.5	0.01145	mg/L	0.000831	0.05727	mg/L	0.004156	7.26%
Ba 233.527†	3996.0	0.8657	mg/L	0.01883	4.328	mg/L	0.0942	2.18%
Be 313.042†	1425.9	0.00208	mg/L	0.000066	0.01040	mg/L	0.000328	3.15%
Ca 317.933†	346312.3	24.38	mg/L	0.650	121.9	mg/L	3.25	2.67%
Cd 228.802†	1101.4	0.03402	mg/L	0.000081	0.1701	mg/L	0.00041	0.24%
Co 228.616†	1701.7	0.04107	mg/L	0.000294	0.2053	mg/L	0.00147	0.72%
Cr 267.716†	806.9	0.1308	mg/L	0.00330	0.6542	mg/L	0.01651	2.52%
Cu 324.752†	24209.7	0.09636	mg/L	0.000220	0.4818	mg/L	0.00110	0.23%
Fe 273.955†	121297.0	92.51	mg/L	2.282	462.6	mg/L	11.41	2.47%
K 766.490†	20840.8	10.46	mg/L	0.225	52.28	mg/L	1.123	2.15%
Mg 279.077†	35805.6	24.23	mg/L	0.580	121.2	mg/L	2.90	2.39%
Mn 257.610†	122194.7	3.378	mg/L	0.0785	16.89	mg/L	0.393	2.32%
Mo 202.031†	62.7	0.00285	mg/L	0.000116	0.01426	mg/L	0.000582	4.08%
Na 589.592†	8754.6	0.6871	mg/L	0.01395	3.436	mg/L	0.0697	2.03%
Na 330.237†	-4.9	0.02561	mg/L	0.172896	0.1281	mg/L	0.86448	675.07%
Ni 231.604†	409.0	0.09924	mg/L	0.002402	0.4962	mg/L	0.01201	2.42%
Pb 220.353†	12219.4	1.538	mg/L	0.0072	7.692	mg/L	0.0360	0.47%
Sb 206.836†	31.8	0.00968	mg/L	0.001605	0.04841	mg/L	0.008024	16.58%
Se 196.026†	15.9	0.01055	mg/L	0.002747	0.05277	mg/L	0.013737	26.03%
Si 288.158†	1660.9	0.7748	mg/L	0.01301	3.874	mg/L	0.0651	1.68%
Sn 189.927†	-22.6	-0.00229	mg/L	0.002007	-0.01145	mg/L	0.010037	87.62%
Sr 421.552†	260310.4	0.2779	mg/L	0.00659	1.389	mg/L	0.0330	2.37%
Ti 334.903†	63704.2	3.055	mg/L	0.0743	15.28	mg/L	0.371	2.43%
Tl 190.801†	-13.5	0.00383	mg/L	0.001518	0.01915	mg/L	0.007591	39.65%
V 292.402†	17922.4	0.1330	mg/L	0.00003	0.6649	mg/L	0.00014	0.02%
Zn 206.200†	6134.8	1.513	mg/L	0.0338	7.567	mg/L	0.1691	2.23%

Sequence No.: 33 ZZZZZZ
Sample ID: ~~VR34 A-L SWC~~
Dilution: 25.000000X All-W Del

Autosampler Location: 320
Date Collected: 11/16/2012 11:18:27 AM
Data Type: Original

Nebulizer Parameters: VR34 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR34 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2187250.1	96.90	%	1.013				1.05%
ScR 361.383	275219.2	96.25	%	1.648				1.71%
Ag 328.068†	22.8	0.00014	mg/L	0.000097	0.00338	mg/L	0.002434	71.93%
Al 308.215†	19208.2	10.78	mg/L	0.233	269.6	mg/L	5.81	2.16%
As 188.979†	-3.0	0.01171	mg/L	0.000711	0.2928	mg/L	0.01778	6.07%
B 249.677†	22.7	0.00289	mg/L	0.000401	0.07215	mg/L	0.010026	13.90%
Ba 233.527†	821.5	0.1784	mg/L	0.00179	4.461	mg/L	0.0448	1.00%
Be 313.042†	368.1	0.00054	mg/L	0.000050	0.01359	mg/L	0.001257	9.25%
Ca 317.933†	75634.6	5.325	mg/L	0.0935	133.1	mg/L	2.34	1.76%
Cd 228.802†	247.2	0.00767	mg/L	0.000259	0.1919	mg/L	0.00647	3.37%
Co 228.616†	276.7	0.00670	mg/L	0.000296	0.1675	mg/L	0.00739	4.41%
Cr 267.716†	113.1	0.01833	mg/L	0.000602	0.4582	mg/L	0.01504	3.28%
Cu 324.752†	4786.8	0.01899	mg/L	0.000627	0.4748	mg/L	0.01569	3.30%
Fe 273.955†	21314.4	16.26	mg/L	0.369	406.4	mg/L	9.22	2.27%
K 766.490†	3380.5	1.696	mg/L	0.0359	42.40	mg/L	0.897	2.12%
Mg 279.077†	6360.5	4.305	mg/L	0.0398	107.6	mg/L	0.99	0.92%
Mn 257.610†	31199.3	0.8625	mg/L	0.01749	21.56	mg/L	0.437	2.03%
Mo 202.031†	10.6	0.00047	mg/L	0.000144	0.01170	mg/L	0.003597	30.76%
Na 589.592†	1456.3	0.1143	mg/L	0.00439	2.857	mg/L	0.1097	3.84%
Na 330.237†	-20.1	-0.7044	mg/L	0.23705	-17.61	mg/L	5.926	33.65%
Ni 231.604†	71.4	0.01733	mg/L	0.000712	0.4334	mg/L	0.01779	4.11%
Pb 220.353†	2898.6	0.3642	mg/L	0.01049	9.104	mg/L	0.2623	2.88%
Sb 206.836†	5.7	0.00176	mg/L	0.000865	0.04406	mg/L	0.021624	49.08%
Se 196.026†	2.2	0.00147	mg/L	0.002161	0.03667	mg/L	0.054031	147.33%
Si 288.158†	320.3	0.1494	mg/L	0.00724	3.734	mg/L	0.1810	4.85%
Sn 189.927†	-7.6	-0.00122	mg/L	0.000370	-0.03058	mg/L	0.009238	30.21%
Sr 421.552†	54317.7	0.05799	mg/L	0.001230	1.450	mg/L	0.0307	2.12%
Ti 334.903†	9925.9	0.4760	mg/L	0.00889	11.90	mg/L	0.222	1.87%
Tl 190.801†	-5.6	-0.00056	mg/L	0.000179	-0.01388	mg/L	0.004481	32.28%
V 292.402†	2758.0	0.02043	mg/L	0.000606	0.5108	mg/L	0.01514	2.96%
Zn 206.200†	1380.0	0.3404	mg/L	0.00341	8.510	mg/L	0.0852	1.00%

Sequence No.: 34
Sample ID: VR34 A SWC

Dilution: 5.000000X

Del

Autosampler Location: 321
Date Collected: 11/16/2012 11:22:27 AM
Data Type: Original

Nebulizer Parameters: VR34 A SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2149190.2	95.22	%	2.720				2.86%
ScR 361.383	274539.6	96.02	%	3.268				3.40%
Ag 328.068†	86.9	0.00052	mg/L	0.000050	0.00261	mg/L	0.000251	9.60%
Al 308.215†	100242.6	56.28	mg/L	1.541	281.4	mg/L	7.71	2.74%
As 188.979†	3.2	0.07061	mg/L	0.000630	0.3530	mg/L	0.00315	0.89%
B 249.677†	104.1	0.01320	mg/L	0.001418	0.06602	mg/L	0.007089	10.74%
Ba 233.527†	4256.9	0.9244	mg/L	0.01945	4.622	mg/L	0.0972	2.10%
Be 313.042†	1460.6	0.00215	mg/L	0.000101	0.01073	mg/L	0.000503	4.69%
Ca 317.933†	400273.4	28.18	mg/L	0.771	140.9	mg/L	3.85	2.74%
Cd 228.802†	1238.1	0.03834	mg/L	0.002538	0.1917	mg/L	0.01269	6.62%
Co 228.616†	1449.5	0.03515	mg/L	0.002292	0.1757	mg/L	0.01146	6.52%
Cr 267.716†	637.1	0.1033	mg/L	0.00266	0.5166	mg/L	0.01332	2.58%
Cu 324.752†	23726.8	0.09431	mg/L	0.004927	0.4716	mg/L	0.02463	5.22%
Fe 273.955†	111389.1	84.96	mg/L	2.432	424.8	mg/L	12.16	2.86%
K 766.490†	17552.8	8.806	mg/L	0.2757	44.03	mg/L	1.379	3.13%
Mg 279.077†	31465.8	21.29	mg/L	0.578	106.5	mg/L	2.89	2.71%
Mn 257.610†	163584.7	4.522	mg/L	0.1237	22.61	mg/L	0.618	2.73%
Mo 202.031†	62.1	0.00278	mg/L	0.000298	0.01391	mg/L	0.001489	10.70%
Na 589.592†	7583.8	0.5952	mg/L	0.01381	2.976	mg/L	0.0691	2.32%
Na 330.237†	-8.1	-0.3027	mg/L	0.14388	-1.513	mg/L	0.7194	47.54%
Ni 231.604†	369.0	0.08955	mg/L	0.001376	0.4477	mg/L	0.00688	1.54%
Pb 220.353†	14245.2	1.790	mg/L	0.0865	8.952	mg/L	0.4324	4.83%
Sb 206.836†	39.8	0.01215	mg/L	0.001723	0.06077	mg/L	0.008617	14.18%
Se 196.026†	5.3	0.00351	mg/L	0.004529	0.01755	mg/L	0.022644	128.99%
Si 288.158†	1662.5	0.7751	mg/L	0.01863	3.876	mg/L	0.0932	2.40%
Sn 189.927†	-12.2	0.00078	mg/L	0.000380	0.00389	mg/L	0.001899	48.85%
Sr 421.552†	280196.3	0.2991	mg/L	0.00849	1.496	mg/L	0.0425	2.84%
Ti 334.903†	51468.5	2.468	mg/L	0.0700	12.34	mg/L	0.350	2.84%
Tl 190.801†	-12.6	0.00354	mg/L	0.000637	0.01771	mg/L	0.003187	17.99%
V 292.402†	13899.6	0.1029	mg/L	0.00528	0.5145	mg/L	0.02640	5.13%
Zn 206.200†	7180.2	1.771	mg/L	0.0375	8.856	mg/L	0.1875	2.12%

Sequence No.: 35
Sample ID: VR34 ADUP SWC

Dilution: 5.000000X

Del

Autosampler Location: 322
Date Collected: 11/16/2012 11:26:28 AM
Data Type: Original

Nebulizer Parameters: VR34 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206283.3	97.74	%	0.873				0.89%
ScR 361.383	278988.1	97.57	%	0.237				0.24%
Ag 328.068†	122.9	0.00073	mg/L	0.000181	0.00364	mg/L	0.000904	24.87%
Al 308.215†	98358.9	55.22	mg/L	0.599	276.1	mg/L	3.00	1.08%
As 188.979†	9.6	0.07571	mg/L	0.003589	0.3786	mg/L	0.01794	4.74%
B 249.677†	107.2	0.01360	mg/L	0.001376	0.06802	mg/L	0.006879	10.11%
Ba 233.527†	4302.2	0.9349	mg/L	0.00953	4.675	mg/L	0.0476	1.02%
Be 313.042†	1436.9	0.00211	mg/L	0.000012	0.01054	mg/L	0.000059	0.56%
Ca 317.933†	411346.9	28.96	mg/L	0.250	144.8	mg/L	1.25	0.86%
Cd 228.802†	1375.1	0.04267	mg/L	0.000340	0.2133	mg/L	0.00170	0.80%
Co 228.616†	1469.7	0.03564	mg/L	0.000469	0.1782	mg/L	0.00234	1.32%
Cr 267.716†	658.0	0.1066	mg/L	0.00090	0.5329	mg/L	0.00449	0.84%
Cu 324.752†	26404.5	0.1045	mg/L	0.00078	0.5223	mg/L	0.00392	0.75%
Fe 273.955†	107326.1	81.86	mg/L	0.886	409.3	mg/L	4.43	1.08%
K 766.490†	17592.3	8.826	mg/L	0.1074	44.13	mg/L	0.537	1.22%
Mg 279.077†	30919.8	20.92	mg/L	0.219	104.6	mg/L	1.10	1.05%
Mn 257.610†	165451.5	4.574	mg/L	0.0449	22.87	mg/L	0.225	0.98%
Mo 202.031†	69.9	0.00316	mg/L	0.000219	0.01582	mg/L	0.001097	6.93%
Na 589.592†	7271.9	0.5707	mg/L	0.00645	2.854	mg/L	0.0322	1.13%
Na 330.237†	-7.9	-0.3184	mg/L	0.15856	-1.592	mg/L	0.7928	49.80%
Ni 231.604†	359.1	0.08713	mg/L	0.000685	0.4356	mg/L	0.00342	0.79%
Pb 220.353†	15532.7	1.951	mg/L	0.0132	9.756	mg/L	0.0658	0.67%
Sb 206.836†	36.3	0.01109	mg/L	0.000916	0.05544	mg/L	0.004578	8.26%
Se 196.026†	7.5	0.00498	mg/L	0.003074	0.02490	mg/L	0.015370	61.74%
Si 288.158†	1571.7	0.7329	mg/L	0.00364	3.665	mg/L	0.0182	0.50%
Sn 189.927†	-6.7	0.00229	mg/L	0.001595	0.01146	mg/L	0.007974	69.60%
Sr 421.552†	293695.6	0.3135	mg/L	0.00346	1.568	mg/L	0.0173	1.10%
Ti 334.903†	52766.0	2.530	mg/L	0.0270	12.65	mg/L	0.135	1.07%
Tl 190.801†	-14.8	0.00230	mg/L	0.003461	0.01148	mg/L	0.017305	150.69%
V 292.402†	14508.1	0.1076	mg/L	0.00070	0.5382	mg/L	0.00350	0.65%
Zn 206.200†	7612.4	1.878	mg/L	0.0191	9.389	mg/L	0.0954	1.02%

Sequence No.: 36
Sample ID: VR34 ASPK SWC

Del

Dilution: 5.000000X

Autosampler Location: 323
Date Collected: 11/16/2012 11:30:29 AM
Data Type: Original

Nebulizer Parameters: VR34 ASPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2155307.2	95.49	%	1.278				1.34%
ScR 361.383	278894.3	97.54	%	1.481				1.52%
Ag 328.068†	35135.6	0.1989	mg/L	0.00549	0.9946	mg/L	0.02744	2.76%
Al 308.215†	99785.7	56.02	mg/L	0.748	280.1	mg/L	3.74	1.34%
As 188.979†	1473.8	0.8465	mg/L	0.02588	4.233	mg/L	0.1294	3.06%
B 249.677†	118.9	0.01466	mg/L	0.000535	0.07329	mg/L	0.002676	3.65%
Ba 233.527†	8089.5	1.770	mg/L	0.0192	8.851	mg/L	0.0958	1.08%
Be 313.042†	133573.2	0.2008	mg/L	0.00289	1.004	mg/L	0.0145	1.44%
Ca 317.933†	456894.9	32.17	mg/L	0.464	160.8	mg/L	2.32	1.44%
Cd 228.802†	8430.6	0.2604	mg/L	0.00813	1.302	mg/L	0.0406	3.12%
Co 228.616†	8846.6	0.2451	mg/L	0.00800	1.225	mg/L	0.0400	3.26%
Cr 267.716†	2015.5	0.3246	mg/L	0.00381	1.623	mg/L	0.0191	1.18%
Cu 324.752†	79569.8	0.3088	mg/L	0.00873	1.544	mg/L	0.0436	2.83%
Fe 273.955†	104340.3	79.58	mg/L	1.191	397.9	mg/L	5.95	1.50%
K 766.490†	25832.6	12.96	mg/L	0.213	64.80	mg/L	1.065	1.64%
Mg 279.077†	37600.8	25.46	mg/L	0.345	127.3	mg/L	1.73	1.36%
Mn 257.610†	166529.3	4.604	mg/L	0.0719	23.02	mg/L	0.359	1.56%
Mo 202.031†	76.3	0.00344	mg/L	0.000281	0.01718	mg/L	0.001407	8.19%
Na 589.592†	57925.8	4.546	mg/L	0.0528	22.73	mg/L	0.264	1.16%
Na 330.237†	115.9	3.912	mg/L	0.2136	19.56	mg/L	1.068	5.46%
Ni 231.604†	1204.8	0.2920	mg/L	0.00195	1.460	mg/L	0.0097	0.67%
Pb 220.353†	22106.0	2.773	mg/L	0.0879	13.87	mg/L	0.440	3.17%
Sb 206.836†	44.7	0.01121	mg/L	0.000230	0.05605	mg/L	0.001148	2.05%
Se 196.026†	1178.4	0.7912	mg/L	0.03004	3.956	mg/L	0.1502	3.80%
Si 288.158†	1434.3	0.6705	mg/L	0.00502	3.352	mg/L	0.0251	0.75%
Sn 189.927†	-19.4	-0.00057	mg/L	0.001348	-0.00283	mg/L	0.006738	237.86%
Sr 421.552†	472512.9	0.5044	mg/L	0.00674	2.522	mg/L	0.0337	1.34%
Ti 334.903†	49863.7	2.391	mg/L	0.0331	11.95	mg/L	0.166	1.38%
Tl 190.801†	1942.9	0.7659	mg/L	0.02279	3.829	mg/L	0.1140	2.98%
V 292.402†	40132.0	0.3044	mg/L	0.00810	1.522	mg/L	0.0405	2.66%
Zn 206.200†	8205.6	2.024	mg/L	0.0239	10.12	mg/L	0.120	1.18%

Sequence No.: 37
Sample ID: ~~VR34 APOST SWC~~ ZZZZZZ
Dilution: 5.000000X

Del
[handwritten initials] 11-20

Autosampler Location: 324
Date Collected: 11/16/2012 11:34:16 AM
Data Type: Original

Nebulizer Parameters: VR34 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2148807.7	95.20	%	0.624				0.66%
ScR 361.383	274992.8	96.18	%	0.850				0.88%
Ag 328.068†	93219.8	0.5277	mg/L	0.00519	2.638	mg/L	0.0259	0.98%
Al 308.215†	103687.8	58.21	mg/L	0.871	291.0	mg/L	4.36	1.50%
As 188.979†	4052.1	2.213	mg/L	0.0162	11.07	mg/L	0.081	0.73%
B 249.677†	107.1	0.01243	mg/L	0.000485	0.06213	mg/L	0.002426	3.90%
Ba 233.527†	13982.7	3.068	mg/L	0.0368	15.34	mg/L	0.184	1.20%
Be 313.042†	335091.5	0.5037	mg/L	0.00798	2.519	mg/L	0.0399	1.58%
Ca 317.933†	545804.5	38.43	mg/L	0.513	192.1	mg/L	2.56	1.33%
Cd 228.802†	20242.0	0.6244	mg/L	0.00481	3.122	mg/L	0.0241	0.77%
Co 228.616†	21394.7	0.6006	mg/L	0.00424	3.003	mg/L	0.0212	0.71%
Cr 267.716†	3962.4	0.6375	mg/L	0.00711	3.188	mg/L	0.0355	1.11%
Cu 324.752†	167579.5	0.6476	mg/L	0.00408	3.238	mg/L	0.0204	0.63%
Fe 273.955†	113193.9	86.33	mg/L	1.368	431.6	mg/L	6.84	1.59%
K 766.490†	38024.5	19.08	mg/L	0.200	95.39	mg/L	0.999	1.05%
Mg 279.077†	46464.4	31.46	mg/L	0.391	157.3	mg/L	1.95	1.24%
Mn 257.610†	181041.6	5.005	mg/L	0.0820	25.02	mg/L	0.410	1.64%
Mo 202.031†	80.3	0.00355	mg/L	0.000140	0.01777	mg/L	0.000699	3.93%
Na 589.592†	133883.8	10.51	mg/L	0.151	52.54	mg/L	0.753	1.43%
Na 330.237†	299.8	10.25	mg/L	0.256	51.26	mg/L	1.281	2.50%
Ni 231.604†	2437.1	0.5905	mg/L	0.00660	2.952	mg/L	0.0330	1.12%
Pb 220.353†	32042.4	4.015	mg/L	0.0337	20.08	mg/L	0.168	0.84%
Sb 206.836†	57.5	0.01200	mg/L	0.001946	0.05999	mg/L	0.009732	16.22%
Se 196.026†	3217.5	2.160	mg/L	0.0138	10.80	mg/L	0.069	0.64%
Si 288.158†	1612.6	0.7553	mg/L	0.00824	3.777	mg/L	0.0412	1.09%
Sn 189.927†	-19.7	0.00020	mg/L	0.000983	0.00100	mg/L	0.004913	489.65%
Sr 421.552†	743418.8	0.7936	mg/L	0.01012	3.968	mg/L	0.0506	1.28%
Ti 334.903†	51370.6	2.463	mg/L	0.0402	12.31	mg/L	0.201	1.63%
Tl 190.801†	5286.3	2.071	mg/L	0.0209	10.36	mg/L	0.104	1.01%
V 292.402†	84044.3	0.6408	mg/L	0.00357	3.204	mg/L	0.0179	0.56%
Zn 206.200†	9142.9	2.255	mg/L	0.0202	11.28	mg/L	0.101	0.89%

Sequence No.: 38
Sample ID: VR34 MB1SPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 325
Date Collected: 11/16/2012 11:38:04 AM
Data Type: Original

Nebulizer Parameters: VR34 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2118596.6	93.86	%	0.984				1.05%
ScR 361.383	272914.4	95.45	%	2.314				2.42%
Ag 328.068†	95223.6	0.5390	mg/L	0.00326	1.078	mg/L	0.0065	0.61%
Al 308.215†	3818.1	2.136	mg/L	0.0884	4.272	mg/L	0.1767	4.14%
As 188.979†	3858.0	2.042	mg/L	0.0131	4.083	mg/L	0.0261	0.64%
B 249.677†	8.2	-0.00006	mg/L	0.000541	-0.00011	mg/L	0.001082	941.96%
Ba 233.527†	9927.3	2.188	mg/L	0.0800	4.376	mg/L	0.1601	3.66%
Be 313.042†	339236.1	0.5100	mg/L	0.02053	1.020	mg/L	0.0411	4.03%
Ca 317.933†	147491.2	10.38	mg/L	0.416	20.77	mg/L	0.832	4.00%
Cd 228.802†	17929.9	0.5528	mg/L	0.00455	1.106	mg/L	0.0091	0.82%
Co 228.616†	18873.9	0.5350	mg/L	0.00567	1.070	mg/L	0.0113	1.06%
Cr 267.716†	3371.1	0.5416	mg/L	0.01994	1.083	mg/L	0.0399	3.68%
Cu 324.752†	134376.4	0.5168	mg/L	0.00333	1.034	mg/L	0.0067	0.64%
Fe 273.955†	2852.0	2.171	mg/L	0.0890	4.343	mg/L	0.1781	4.10%
K 766.490†	20795.5	10.43	mg/L	0.433	20.87	mg/L	0.866	4.15%
Mg 279.077†	15980.7	10.84	mg/L	0.416	21.67	mg/L	0.832	3.84%
Mn 257.610†	19414.4	0.5370	mg/L	0.02047	1.074	mg/L	0.0409	3.81%
Mo 202.031†	23.2	0.00102	mg/L	0.000127	0.00203	mg/L	0.000255	12.52%
Na 589.592†	127778.0	10.03	mg/L	0.400	20.06	mg/L	0.799	3.98%
Na 330.237†	281.9	9.640	mg/L	0.1920	19.28	mg/L	0.384	1.99%
Ni 231.604†	2112.6	0.5117	mg/L	0.01770	1.023	mg/L	0.0354	3.46%
Pb 220.353†	16366.2	2.046	mg/L	0.0218	4.092	mg/L	0.0436	1.06%
Sb 206.836†	16.1	-0.00081	mg/L	0.002329	-0.00162	mg/L	0.004659	287.03%
Se 196.026†	3056.6	2.052	mg/L	0.0105	4.105	mg/L	0.0211	0.51%
Si 288.158†	5.3	0.00582	mg/L	0.002194	0.01164	mg/L	0.004389	37.69%
Sn 189.927†	-26.8	-0.00553	mg/L	0.000869	-0.01105	mg/L	0.001738	15.72%
Sr 421.552†	473293.3	0.5053	mg/L	0.02004	1.011	mg/L	0.0401	3.97%
Ti 334.903†	66.2	0.00257	mg/L	0.000247	0.00514	mg/L	0.000494	9.61%
Tl 190.801†	5139.1	2.005	mg/L	0.0103	4.011	mg/L	0.0206	0.51%
V 292.402†	69887.5	0.5360	mg/L	0.00430	1.072	mg/L	0.0086	0.80%
Zn 206.200†	2099.1	0.5179	mg/L	0.01793	1.036	mg/L	0.0359	3.46%

Sequence No.: 39
Sample ID: CV 5
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 11:42:05 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2206811.7	97.77	%	0.434				0.44%
ScR 361.383	266266.9	93.12	%	2.816				3.02%
Ag 328.068†	177279.2	1.003	mg/L	0.0108	1.003	mg/L	0.0108	1.07%
Al 308.215†	3956.3	2.186	mg/L	0.0703	2.186	mg/L	0.0703	3.22%
As 188.979†	3793.0	2.035	mg/L	0.0044	2.035	mg/L	0.0044	0.22%
B 249.677†	8173.9	1.042	mg/L	0.0317	1.042	mg/L	0.0317	3.04%
Ba 233.527†	5077.2	1.119	mg/L	0.0364	1.119	mg/L	0.0364	3.26%
Be 313.042†	675541.0	1.016	mg/L	0.0276	1.016	mg/L	0.0276	2.71%
Ca 317.933†	29753.8	2.095	mg/L	0.0636	2.095	mg/L	0.0636	3.04%
Cd 228.802†	34050.4	1.062	mg/L	0.0087	1.062	mg/L	0.0087	0.82%
Co 228.616†	36980.3	1.047	mg/L	0.0100	1.047	mg/L	0.0100	0.95%
Cr 267.716†	6911.9	1.112	mg/L	0.0349	1.112	mg/L	0.0349	3.14%
Cu 324.752†	268239.0	1.031	mg/L	0.0107	1.031	mg/L	0.0107	1.04%
Fe 273.955†	2910.9	2.213	mg/L	0.0655	2.213	mg/L	0.0655	2.96%
K 766.490†	42707.1	21.43	mg/L	0.662	21.43	mg/L	0.662	3.09%
Mg 279.077†	3235.2	2.201	mg/L	0.0697	2.201	mg/L	0.0697	3.17%
Mn 257.610†	38476.2	1.064	mg/L	0.0319	1.064	mg/L	0.0319	2.99%
Mo 202.031†	21292.7	1.061	mg/L	0.0036	1.061	mg/L	0.0036	0.34%
Na 589.592†	670458.8	52.62	mg/L	1.692	52.62	mg/L	1.692	3.21%
Na 330.237†	1591.2	55.27	mg/L	1.214	55.27	mg/L	1.214	2.20%
Ni 231.604†	4340.7	1.054	mg/L	0.0331	1.054	mg/L	0.0331	3.14%
Pb 220.353†	16595.5	2.075	mg/L	0.0056	2.075	mg/L	0.0056	0.27%
Sb 206.836†	7151.3	2.185	mg/L	0.0071	2.185	mg/L	0.0071	0.33%
Se 196.026†	2978.9	2.000	mg/L	0.0040	2.000	mg/L	0.0040	0.20%
Si 288.158†	4849.5	2.253	mg/L	0.0639	2.253	mg/L	0.0639	2.84%
Sn 189.927†	4069.2	1.045	mg/L	0.0064	1.045	mg/L	0.0064	0.61%
Sr 421.552†	960513.9	1.025	mg/L	0.0312	1.025	mg/L	0.0312	3.04%
Ti 334.903†	22729.5	1.089	mg/L	0.0331	1.089	mg/L	0.0331	3.04%
Tl 190.801†	5176.2	2.016	mg/L	0.0027	2.016	mg/L	0.0027	0.13%
V 292.402†	135536.1	1.040	mg/L	0.0121	1.040	mg/L	0.0121	1.16%
Zn 206.200†	4397.6	1.085	mg/L	0.0322	1.085	mg/L	0.0322	2.97%

Sequence No.: 40
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 11/16/2012 11:46:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2218651.4	98.29	%	0.653				0.66%
ScR 361.383	277441.1	97.03	%	0.321				0.33%
Ag 328.068†	27.1	0.00015	mg/L	0.000234	0.00015	mg/L	0.000234	153.05%
Al 308.215†	32.0	0.01793	mg/L	0.001828	0.01793	mg/L	0.001828	10.20%
As 188.979†	-1.1	-0.00053	mg/L	0.001862	-0.00053	mg/L	0.001862	354.04%
B 249.677†	17.8	0.00227	mg/L	0.000857	0.00227	mg/L	0.000857	37.76%
Ba 233.527†	-2.4	-0.00053	mg/L	0.000551	-0.00053	mg/L	0.000551	104.88%
Be 313.042†	151.8	0.00023	mg/L	0.000029	0.00023	mg/L	0.000029	12.63%
Ca 317.933†	30.8	0.00217	mg/L	0.000687	0.00217	mg/L	0.000687	31.70%
Cd 228.802†	-4.9	-0.00015	mg/L	0.000198	-0.00015	mg/L	0.000198	130.78%
Co 228.616†	-14.0	-0.00040	mg/L	0.000137	-0.00040	mg/L	0.000137	34.34%
Cr 267.716†	-8.8	-0.00142	mg/L	0.000553	-0.00142	mg/L	0.000553	38.95%
Cu 324.752†	72.2	0.00028	mg/L	0.000161	0.00028	mg/L	0.000161	57.89%
Fe 273.955†	8.8	0.00669	mg/L	0.000954	0.00669	mg/L	0.000954	14.25%
K 766.490†	34.4	0.01727	mg/L	0.006265	0.01727	mg/L	0.006265	36.27%
Mg 279.077†	2.7	0.00185	mg/L	0.005181	0.00185	mg/L	0.005181	280.71%
Mn 257.610†	0.9	0.00002	mg/L	0.000083	0.00002	mg/L	0.000083	335.33%
Mo 202.031†	16.8	0.00084	mg/L	0.000204	0.00084	mg/L	0.000204	24.29%
Na 589.592†	61.4	0.00482	mg/L	0.002792	0.00482	mg/L	0.002792	57.96%
Na 330.237†	-21.2	-0.7361	mg/L	0.25603	-0.7361	mg/L	0.25603	34.78%
Ni 231.604†	1.5	0.00038	mg/L	0.001510	0.00038	mg/L	0.001510	401.09%
Pb 220.353†	0.7	0.00009	mg/L	0.000373	0.00009	mg/L	0.000373	424.78%
Sb 206.836†	10.7	0.00330	mg/L	0.002100	0.00330	mg/L	0.002100	63.74%
Se 196.026†	3.4	0.00230	mg/L	0.003741	0.00230	mg/L	0.003741	162.81%
Si 288.158†	7.5	0.00351	mg/L	0.001787	0.00351	mg/L	0.001787	50.95%
Sn 189.927†	-1.3	-0.00033	mg/L	0.000502	-0.00033	mg/L	0.000502	153.20%
Sr 421.552†	185.5	0.00020	mg/L	0.000059	0.00020	mg/L	0.000059	29.57%
Ti 334.903†	28.3	0.00136	mg/L	0.000636	0.00136	mg/L	0.000636	46.83%
Tl 190.801†	3.1	0.00120	mg/L	0.000968	0.00120	mg/L	0.000968	80.31%
V 292.402†	-19.2	-0.00015	mg/L	0.000076	-0.00015	mg/L	0.000076	49.44%
Zn 206.200†	0.3	0.00008	mg/L	0.000471	0.00008	mg/L	0.000471	573.91%

User canceled analysis.

Analysis Begun

Start Time: 11/16/2012 12:11:01 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV 6
Autosampler Location: 7
Date Collected: 11/16/2012 12:11:02 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2324139.6	103.0	%	0.56				0.55%
ScR 361.383	288299.8	100.8	%	1.49				1.48%
Ag 328.068†	166891.9	0.9447	mg/L	0.00330	0.9447	mg/L	0.00330	0.35%
Al 308.215†	3587.2	1.981	mg/L	0.0332	1.981	mg/L	0.0332	1.68%
As 188.979†	3584.7	1.922	mg/L	0.0096	1.922	mg/L	0.0096	0.50%
B 249.677†	7474.7	0.9531	mg/L	0.01492	0.9531	mg/L	0.01492	1.57%
Ba 233.527†	4620.9	1.018	mg/L	0.0147	1.018	mg/L	0.0147	1.44%
Be 313.042†	617768.5	0.9287	mg/L	0.01469	0.9287	mg/L	0.01469	1.58%
Ca 317.933†	27095.7	1.908	mg/L	0.0349	1.908	mg/L	0.0349	1.83%
Cd 228.802†	32028.7	0.9992	mg/L	0.00562	0.9992	mg/L	0.00562	0.56%
Co 228.616†	34866.8	0.9868	mg/L	0.00512	0.9868	mg/L	0.00512	0.52%
Cr 267.716†	6314.1	1.016	mg/L	0.0173	1.016	mg/L	0.0173	1.70%
Cu 324.752†	252729.2	0.9715	mg/L	0.00484	0.9715	mg/L	0.00484	0.50%
Fe 273.955†	2643.1	2.009	mg/L	0.0365	2.009	mg/L	0.0365	1.82%
K 766.490†	39054.1	19.59	mg/L	0.281	19.59	mg/L	0.281	1.44%
Mg 279.077†	2937.9	1.999	mg/L	0.0297	1.999	mg/L	0.0297	1.48%
Mn 257.610†	35203.9	0.9734	mg/L	0.01460	0.9734	mg/L	0.01460	1.50%
Mo 202.031†	20134.6	1.003	mg/L	0.0058	1.003	mg/L	0.0058	0.58%
Na 589.592†	612176.7	48.05	mg/L	0.793	48.05	mg/L	0.793	1.65%
Na 330.237†	1469.6	51.04	mg/L	0.691	51.04	mg/L	0.691	1.35%
Ni 231.604†	3965.2	0.9624	mg/L	0.01659	0.9624	mg/L	0.01659	1.72%
Pb 220.353†	15666.5	1.959	mg/L	0.0107	1.959	mg/L	0.0107	0.54%
Sb 206.836†	6748.1	2.063	mg/L	0.0158	2.063	mg/L	0.0158	0.77%
Se 196.026†	2818.3	1.892	mg/L	0.0097	1.892	mg/L	0.0097	0.51%
Si 288.158†	4428.6	2.057	mg/L	0.0344	2.057	mg/L	0.0344	1.67%
Sn 189.927†	3852.5	0.9897	mg/L	0.00754	0.9897	mg/L	0.00754	0.76%
Sr 421.552†	877778.5	0.9370	mg/L	0.01461	0.9370	mg/L	0.01461	1.56%
Ti 334.903†	20775.3	0.9957	mg/L	0.01523	0.9957	mg/L	0.01523	1.53%
Tl 190.801†	4893.6	1.906	mg/L	0.0106	1.906	mg/L	0.0106	0.56%
V 292.402†	127575.6	0.9786	mg/L	0.00470	0.9786	mg/L	0.00470	0.48%
Zn 206.200†	4004.8	0.9876	mg/L	0.01621	0.9876	mg/L	0.01621	1.64%

Sequence No.: 2
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 11/16/2012 12:15:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2221827.8	98.43	%	0.875				0.89%
ScR 361.383	286411.0	100.2	%	0.74				0.74%
Ag 328.068†	65.6	0.00037	mg/L	0.000197	0.00037	mg/L	0.000197	53.03%
Al 308.215†	12.8	0.00715	mg/L	0.009959	0.00715	mg/L	0.009959	139.24%
As 188.979†	-0.3	-0.00012	mg/L	0.001127	-0.00012	mg/L	0.001127	952.53%
B 249.677†	10.2	0.00131	mg/L	0.001419	0.00131	mg/L	0.001419	108.62%
Ba 233.527†	0.3	0.00006	mg/L	0.000663	0.00006	mg/L	0.000663	>999.9%
Be 313.042†	147.6	0.00022	mg/L	0.000040	0.00022	mg/L	0.000040	18.06%
Ca 317.933†	14.5	0.00102	mg/L	0.000511	0.00102	mg/L	0.000511	49.91%
Cd 228.802†	-3.1	-0.00010	mg/L	0.000019	-0.00010	mg/L	0.000019	19.22%
Co 228.616†	-15.9	-0.00045	mg/L	0.000096	-0.00045	mg/L	0.000096	21.16%
Cr 267.716†	-7.1	-0.00115	mg/L	0.000209	-0.00115	mg/L	0.000209	18.21%
Cu 324.752†	79.5	0.00031	mg/L	0.000176	0.00031	mg/L	0.000176	57.75%
Fe 273.955†	3.3	0.00250	mg/L	0.001062	0.00250	mg/L	0.001062	42.41%
K 766.490†	23.4	0.01175	mg/L	0.023372	0.01175	mg/L	0.023372	198.86%
Mg 279.077†	5.9	0.00398	mg/L	0.003514	0.00398	mg/L	0.003514	88.37%
Mn 257.610†	-4.8	-0.00013	mg/L	0.000107	-0.00013	mg/L	0.000107	80.68%
Mo 202.031†	11.6	0.00058	mg/L	0.000245	0.00058	mg/L	0.000245	42.30%
Na 589.592†	106.2	0.00834	mg/L	0.001775	0.00834	mg/L	0.001775	21.29%
Na 330.237†	-14.2	-0.4928	mg/L	0.06911	-0.4928	mg/L	0.06911	14.02%
Ni 231.604†	-3.0	-0.00072	mg/L	0.002398	-0.00072	mg/L	0.002398	331.34%
Pb 220.353†	-3.4	-0.00042	mg/L	0.000302	-0.00042	mg/L	0.000302	71.49%
Sb 206.836†	5.8	0.00178	mg/L	0.001089	0.00178	mg/L	0.001089	61.18%
Se 196.026†	6.4	0.00429	mg/L	0.004231	0.00429	mg/L	0.004231	98.70%
Si 288.158†	0.7	0.00031	mg/L	0.002107	0.00031	mg/L	0.002107	682.33%
Sn 189.927†	-2.0	-0.00050	mg/L	0.000280	-0.00050	mg/L	0.000280	55.81%
Sr 421.552†	169.9	0.00018	mg/L	0.000038	0.00018	mg/L	0.000038	21.11%
Ti 334.903†	30.2	0.00145	mg/L	0.000156	0.00145	mg/L	0.000156	10.75%
Tl 190.801†	0.9	0.00034	mg/L	0.000606	0.00034	mg/L	0.000606	176.61%
V 292.402†	-18.7	-0.00015	mg/L	0.000190	-0.00015	mg/L	0.000190	128.09%
Zn 206.200†	-3.2	-0.00080	mg/L	0.000448	-0.00080	mg/L	0.000448	55.95%

Sequence No.: 3
Sample ID: VR34 E SWC

Autosampler Location: 326
Date Collected: 11/16/2012 12:20:11 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2305695.4	102.1	%	0.19				0.19%
ScR 361.383	289630.4	101.3	%	1.58				1.56%
Ag 328.068†	20.1	0.00015	mg/L	0.000364	0.00073	mg/L	0.001822	251.17%
Al 308.215†	111642.1	62.68	mg/L	0.947	313.4	mg/L	4.74	1.51%
As 188.979†	20.6	0.07925	mg/L	0.001194	0.3963	mg/L	0.00597	1.51%
B 249.677†	100.6	0.01277	mg/L	0.000808	0.06386	mg/L	0.004041	6.33%
Ba 233.527†	5422.5	1.183	mg/L	0.0224	5.916	mg/L	0.1122	1.90%
Be 313.042†	1599.8	0.00235	mg/L	0.000052	0.01177	mg/L	0.000262	2.22%
Ca 317.933†	874842.8	61.59	mg/L	0.962	308.0	mg/L	4.81	1.56%
Cd 228.802†	1262.5	0.03915	mg/L	0.000172	0.1958	mg/L	0.00086	0.44%
Co 228.616†	1341.9	0.03212	mg/L	0.000046	0.1606	mg/L	0.00023	0.14%
Cr 267.716†	621.0	0.1002	mg/L	0.00052	0.5010	mg/L	0.00260	0.52%
Cu 324.752†	32638.6	0.1281	mg/L	0.00073	0.6406	mg/L	0.00363	0.57%
Fe 273.955†	97146.3	74.09	mg/L	1.170	370.5	mg/L	5.85	1.58%
K 766.490†	13635.8	6.841	mg/L	0.0950	34.21	mg/L	0.475	1.39%
Mg 279.077†	27907.2	18.89	mg/L	0.297	94.43	mg/L	1.484	1.57%
Mn 257.610†	159658.6	4.413	mg/L	0.0710	22.07	mg/L	0.355	1.61%
Mo 202.031†	89.9	0.00381	mg/L	0.000420	0.01905	mg/L	0.002102	11.04%
Na 589.592†	9675.6	0.7594	mg/L	0.01357	3.797	mg/L	0.0678	1.79%
Na 330.237†	10.9	0.3145	mg/L	0.17710	1.572	mg/L	0.8855	56.31%
Ni 231.604†	365.3	0.08864	mg/L	0.000587	0.4432	mg/L	0.00294	0.66%
Pb 220.353†	9738.5	1.229	mg/L	0.0080	6.145	mg/L	0.0398	0.65%
Sb 206.836†	24.9	0.00758	mg/L	0.002648	0.03792	mg/L	0.013239	34.92%
Se 196.026†	4.1	0.00270	mg/L	0.004212	0.01348	mg/L	0.021059	156.17%
Si 288.158†	2493.9	1.161	mg/L	0.0230	5.806	mg/L	0.1149	1.98%
Sn 189.927†	-47.4	-0.00414	mg/L	0.000979	-0.02070	mg/L	0.004894	23.64%
Sr 421.552†	597556.4	0.6379	mg/L	0.01014	3.190	mg/L	0.0507	1.59%
Ti 334.903†	52453.9	2.514	mg/L	0.0419	12.57	mg/L	0.209	1.67%
Tl 190.801†	-3.6	0.00590	mg/L	0.001832	0.02951	mg/L	0.009162	31.05%
V 292.402†	14141.7	0.1051	mg/L	0.00034	0.5254	mg/L	0.00171	0.33%
Zn 206.200†	7849.8	1.936	mg/L	0.0337	9.682	mg/L	0.1687	1.74%

Sequence No.: 4
Sample ID: VR34 F SWC

Autosampler Location: 327
Date Collected: 11/16/2012 12:24:14 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2262529.8	100.2	%	0.88				0.88%
ScR 361.383	293271.5	102.6	%	0.94				0.91%
Ag 328.068†	41.6	0.00026	mg/L	0.000199	0.00132	mg/L	0.000997	75.25%
Al 308.215†	85276.8	47.88	mg/L	0.587	239.4	mg/L	2.94	1.23%
As 188.979†	-66.8	0.03571	mg/L	0.001981	0.1786	mg/L	0.00990	5.55%
B 249.677†	106.0	0.01348	mg/L	0.000809	0.06739	mg/L	0.004046	6.00%
Ba 233.527†	4161.0	0.9081	mg/L	0.00639	4.540	mg/L	0.0320	0.70%
Be 313.042†	973.3	0.00141	mg/L	0.000048	0.00706	mg/L	0.000238	3.38%
Ca 317.933†	392942.7	27.66	mg/L	0.295	138.3	mg/L	1.47	1.06%
Cd 228.802†	1025.4	0.03210	mg/L	0.000474	0.1605	mg/L	0.00237	1.48%
Co 228.616†	975.4	0.02195	mg/L	0.000395	0.1097	mg/L	0.00197	1.80%
Cr 267.716†	410.9	0.06655	mg/L	0.000217	0.3328	mg/L	0.00109	0.33%
Cu 324.752†	20743.7	0.08159	mg/L	0.000648	0.4080	mg/L	0.00324	0.79%
Fe 273.955†	73238.6	55.86	mg/L	0.518	279.3	mg/L	2.59	0.93%
K 766.490†	18804.8	9.435	mg/L	0.1885	47.17	mg/L	0.943	2.00%
Mg 279.077†	21746.6	14.72	mg/L	0.171	73.59	mg/L	0.856	1.16%
Mn 257.610†	78101.3	2.159	mg/L	0.0235	10.80	mg/L	0.117	1.09%
Mo 202.031†	74.3	0.00340	mg/L	0.000308	0.01700	mg/L	0.001541	9.07%
Na 589.592†	9134.2	0.7169	mg/L	0.00824	3.585	mg/L	0.0412	1.15%
Na 330.237†	9.1	0.4431	mg/L	0.08408	2.215	mg/L	0.4204	18.98%
Ni 231.604†	174.4	0.04233	mg/L	0.002002	0.2116	mg/L	0.01001	4.73%
Pb 220.353†	10484.7	1.320	mg/L	0.0110	6.598	mg/L	0.0549	0.83%
Sb 206.836†	35.1	0.01124	mg/L	0.001921	0.05621	mg/L	0.009606	17.09%
Se 196.026†	5.5	0.00360	mg/L	0.004589	0.01798	mg/L	0.022946	127.63%
Si 288.158†	2613.0	1.216	mg/L	0.0182	6.080	mg/L	0.0912	1.50%
Sn 189.927†	-19.1	-0.00106	mg/L	0.001014	-0.00530	mg/L	0.005072	95.72%
Sr 421.552†	272940.3	0.2914	mg/L	0.00385	1.457	mg/L	0.0192	1.32%
Ti 334.903†	52966.3	2.540	mg/L	0.0303	12.70	mg/L	0.151	1.19%
Tl 190.801†	-1.4	0.00492	mg/L	0.002390	0.02459	mg/L	0.011950	48.60%
V 292.402†	13436.2	0.09983	mg/L	0.000845	0.4991	mg/L	0.00423	0.85%
Zn 206.200†	5556.8	1.371	mg/L	0.0159	6.854	mg/L	0.0795	1.16%

Sequence No.: 5
Sample ID: VR34 G SWC

Autosampler Location: 328
Date Collected: 11/16/2012 12:28:15 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2290367.3	101.5	%	0.60				0.59%
ScR 361.383	288720.5	101.0	%	1.24				1.23%
Ag 328.068†	165.8	0.00097	mg/L	0.000093	0.00485	mg/L	0.000464	9.58%
Al 308.215†	77576.9	43.55	mg/L	0.542	217.8	mg/L	2.71	1.24%
As 188.979†	-38.0	0.04833	mg/L	0.001662	0.2417	mg/L	0.00831	3.44%
B 249.677†	81.4	0.01033	mg/L	0.000529	0.05166	mg/L	0.002645	5.12%
Ba 233.527†	2449.1	0.5305	mg/L	0.00583	2.653	mg/L	0.0291	1.10%
Be 313.042†	973.2	0.00141	mg/L	0.000042	0.00706	mg/L	0.000212	3.01%
Ca 317.933†	420814.1	29.63	mg/L	0.403	148.1	mg/L	2.02	1.36%
Cd 228.802†	1367.3	0.04279	mg/L	0.000460	0.2139	mg/L	0.00230	1.08%
Co 228.616†	963.6	0.02180	mg/L	0.000170	0.1090	mg/L	0.00085	0.78%
Cr 267.716†	437.8	0.07088	mg/L	0.000222	0.3544	mg/L	0.00111	0.31%
Cu 324.752†	23501.1	0.09225	mg/L	0.000684	0.4613	mg/L	0.00342	0.74%
Fe 273.955†	74413.0	56.75	mg/L	0.869	283.8	mg/L	4.34	1.53%
K 766.490†	16774.2	8.416	mg/L	0.0981	42.08	mg/L	0.490	1.17%
Mg 279.077†	22281.1	15.08	mg/L	0.205	75.40	mg/L	1.024	1.36%
Mn 257.610†	63140.0	1.746	mg/L	0.0251	8.728	mg/L	0.1254	1.44%
Mo 202.031†	57.0	0.00252	mg/L	0.000222	0.01258	mg/L	0.001108	8.81%
Na 589.592†	13863.8	1.088	mg/L	0.0116	5.441	mg/L	0.0582	1.07%
Na 330.237†	13.5	0.4085	mg/L	0.12264	2.043	mg/L	0.6132	30.02%
Ni 231.604†	178.2	0.04323	mg/L	0.000951	0.2162	mg/L	0.00475	2.20%
Pb 220.353†	12002.8	1.508	mg/L	0.0113	7.541	mg/L	0.0566	0.75%
Sb 206.836†	20.2	0.00662	mg/L	0.003671	0.03310	mg/L	0.018357	55.46%
Se 196.026†	4.8	0.00317	mg/L	0.002373	0.01584	mg/L	0.011863	74.88%
Si 288.158†	1975.4	0.9198	mg/L	0.00959	4.599	mg/L	0.0480	1.04%
Sn 189.927†	-17.7	-0.00047	mg/L	0.000236	-0.00234	mg/L	0.001181	50.40%
Sr 421.552†	530139.7	0.5659	mg/L	0.00636	2.830	mg/L	0.0318	1.12%
Ti 334.903†	51153.7	2.453	mg/L	0.0291	12.27	mg/L	0.145	1.19%
Tl 190.801†	-0.5	0.00532	mg/L	0.000498	0.02658	mg/L	0.002491	9.37%
V 292.402†	14447.8	0.1075	mg/L	0.00061	0.5376	mg/L	0.00305	0.57%
Zn 206.200†	7634.2	1.883	mg/L	0.0323	9.416	mg/L	0.1613	1.71%

Sequence No.: 6
Sample ID: VR34 H SWC

Autosampler Location: 329
Date Collected: 11/16/2012 12:32:16 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 H SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2270056.9	100.6	%	0.54				0.53%
ScR 361.383	293595.3	102.7	%	3.23				3.14%
Ag 328.068†	-62.3	-0.00032	mg/L	0.000221	-0.00162	mg/L	0.001104	68.01%
Al 308.215†	85262.9	47.87	mg/L	1.485	239.4	mg/L	7.42	3.10%
As 188.979†	-45.6	0.04419	mg/L	0.003403	0.2210	mg/L	0.01702	7.70%
B 249.677†	96.4	0.01225	mg/L	0.000897	0.06125	mg/L	0.004487	7.32%
Ba 233.527†	3710.7	0.8085	mg/L	0.02683	4.043	mg/L	0.1342	3.32%
Be 313.042†	972.4	0.00141	mg/L	0.000095	0.00707	mg/L	0.000473	6.69%
Ca 317.933†	344712.2	24.27	mg/L	0.738	121.3	mg/L	3.69	3.04%
Cd 228.802†	894.7	0.02789	mg/L	0.000380	0.1395	mg/L	0.00190	1.36%
Co 228.616†	944.5	0.02125	mg/L	0.000673	0.1063	mg/L	0.00337	3.17%
Cr 267.716†	412.0	0.06684	mg/L	0.002160	0.3342	mg/L	0.01080	3.23%
Cu 324.752†	19824.5	0.07815	mg/L	0.000695	0.3908	mg/L	0.00348	0.89%
Fe 273.955†	75413.7	57.52	mg/L	1.572	287.6	mg/L	7.86	2.73%
K 766.490†	20745.0	10.41	mg/L	0.322	52.04	mg/L	1.611	3.10%
Mg 279.077†	21892.8	14.82	mg/L	0.449	74.08	mg/L	2.245	3.03%
Mn 257.610†	72424.9	2.002	mg/L	0.0584	10.01	mg/L	0.292	2.92%
Mo 202.031†	65.8	0.00301	mg/L	0.000183	0.01506	mg/L	0.000917	6.09%
Na 589.592†	7333.5	0.5756	mg/L	0.01870	2.878	mg/L	0.0935	3.25%
Na 330.237†	3.2	0.2703	mg/L	0.11805	1.351	mg/L	0.5902	43.67%
Ni 231.604†	196.2	0.04760	mg/L	0.001391	0.2380	mg/L	0.00695	2.92%
Pb 220.353†	7127.9	0.8999	mg/L	0.01660	4.500	mg/L	0.0830	1.84%
Sb 206.836†	22.9	0.00745	mg/L	0.000316	0.03723	mg/L	0.001580	4.24%
Se 196.026†	5.8	0.00381	mg/L	0.003181	0.01903	mg/L	0.015907	83.59%
Si 288.158†	2021.5	0.9411	mg/L	0.03383	4.706	mg/L	0.1692	3.59%
Sn 189.927†	-24.1	-0.00281	mg/L	0.001192	-0.01404	mg/L	0.005962	42.47%
Sr 421.552†	248516.3	0.2653	mg/L	0.00817	1.326	mg/L	0.0408	3.08%
Ti 334.903†	50832.2	2.438	mg/L	0.0706	12.19	mg/L	0.353	2.90%
Tl 190.801†	-1.5	0.00505	mg/L	0.000631	0.02525	mg/L	0.003157	12.50%
V 292.402†	12626.2	0.09362	mg/L	0.001531	0.4681	mg/L	0.00765	1.63%
Zn 206.200†	4858.2	1.198	mg/L	0.0396	5.992	mg/L	0.1982	3.31%

Sequence No.: 7
Sample ID: VR34 I SWC

Autosampler Location: 330
Date Collected: 11/16/2012 12:36:17 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2288974.6	101.4	%	0.38				0.38%
ScR 361.383	293934.8	102.8	%	1.41				1.37%
Ag 328.068†	20.4	0.00014	mg/L	0.000178	0.00072	mg/L	0.000892	123.09%
Al 308.215†	63337.1	35.56	mg/L	0.516	177.8	mg/L	2.58	1.45%
As 188.979†	-0.0	0.05636	mg/L	0.001541	0.2818	mg/L	0.00771	2.73%
B 249.677†	73.6	0.00932	mg/L	0.000143	0.04662	mg/L	0.000716	1.54%
Ba 233.527†	6341.4	1.387	mg/L	0.0235	6.936	mg/L	0.1174	1.69%
Be 313.042†	905.3	0.00132	mg/L	0.000054	0.00658	mg/L	0.000269	4.08%
Ca 317.933†	331108.2	23.31	mg/L	0.342	116.6	mg/L	1.71	1.47%
Cd 228.802†	1188.0	0.03692	mg/L	0.000237	0.1846	mg/L	0.00118	0.64%
Co 228.616†	1226.2	0.02990	mg/L	0.000155	0.1495	mg/L	0.00077	0.52%
Cr 267.716†	469.6	0.07595	mg/L	0.000820	0.3797	mg/L	0.00410	1.08%
Cu 324.752†	18320.7	0.07281	mg/L	0.000647	0.3641	mg/L	0.00324	0.89%
Fe 273.955†	85763.6	65.41	mg/L	1.093	327.1	mg/L	5.47	1.67%
K 766.490†	11688.5	5.864	mg/L	0.0853	29.32	mg/L	0.427	1.46%
Mg 279.077†	20811.5	14.08	mg/L	0.173	70.39	mg/L	0.864	1.23%
Mn 257.610†	287481.1	7.946	mg/L	0.1286	39.73	mg/L	0.643	1.62%
Mo 202.031†	114.2	0.00543	mg/L	0.000250	0.02717	mg/L	0.001249	4.60%
Na 589.592†	8196.1	0.6433	mg/L	0.01005	3.216	mg/L	0.0502	1.56%
Na 330.237†	9.4	0.2082	mg/L	0.19671	1.041	mg/L	0.9835	94.47%
Ni 231.604†	236.5	0.05740	mg/L	0.001401	0.2870	mg/L	0.00700	2.44%
Pb 220.353†	12959.4	1.625	mg/L	0.0048	8.127	mg/L	0.0242	0.30%
Sb 206.836†	25.9	0.00807	mg/L	0.000951	0.04037	mg/L	0.004753	11.77%
Se 196.026†	7.5	0.00493	mg/L	0.004835	0.02467	mg/L	0.024177	97.99%
Si 288.158†	1103.6	0.5146	mg/L	0.01070	2.573	mg/L	0.0535	2.08%
Sn 189.927†	-23.1	-0.00269	mg/L	0.000688	-0.01347	mg/L	0.003441	25.54%
Sr 421.552†	203974.0	0.2177	mg/L	0.00291	1.089	mg/L	0.0145	1.34%
Ti 334.903†	42102.3	2.019	mg/L	0.0305	10.10	mg/L	0.153	1.51%
Tl 190.801†	-9.7	0.00262	mg/L	0.002462	0.01311	mg/L	0.012312	93.93%
V 292.402†	13433.2	0.1007	mg/L	0.00075	0.5034	mg/L	0.00377	0.75%
Zn 206.200†	7124.1	1.757	mg/L	0.0297	8.787	mg/L	0.1487	1.69%

Sequence No.: 8
Sample ID: VR34 J SWC

Autosampler Location: 331
Date Collected: 11/16/2012 12:40:18 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2291452.4	101.5	%	0.60				0.59%
ScR 361.383	292207.9	102.2	%	2.20				2.15%
Ag 328.068†	29.8	0.00020	mg/L	0.000173	0.00101	mg/L	0.000865	85.62%
Al 308.215†	122001.2	68.50	mg/L	2.157	342.5	mg/L	10.79	3.15%
As 188.979†	-11.8	0.06246	mg/L	0.002501	0.3123	mg/L	0.01251	4.00%
B 249.677†	57.6	0.00727	mg/L	0.000788	0.03634	mg/L	0.003941	10.85%
Ba 233.527†	6099.4	1.330	mg/L	0.0251	6.651	mg/L	0.1253	1.88%
Be 313.042†	1382.6	0.00203	mg/L	0.000063	0.01013	mg/L	0.000313	3.09%
Ca 317.933†	283752.9	19.98	mg/L	0.595	99.89	mg/L	2.975	2.98%
Cd 228.802†	1344.6	0.04172	mg/L	0.000623	0.2086	mg/L	0.00311	1.49%
Co 228.616†	1600.4	0.03941	mg/L	0.000458	0.1971	mg/L	0.00229	1.16%
Cr 267.716†	532.6	0.08711	mg/L	0.001187	0.4356	mg/L	0.00594	1.36%
Cu 324.752†	29164.5	0.1154	mg/L	0.00069	0.5769	mg/L	0.00346	0.60%
Fe 273.955†	114608.4	87.41	mg/L	3.041	437.1	mg/L	15.20	3.48%
K 766.490†	15223.8	7.638	mg/L	0.2233	38.19	mg/L	1.116	2.92%
Mg 279.077†	24710.8	16.71	mg/L	0.546	83.55	mg/L	2.730	3.27%
Mn 257.610†	142185.4	3.930	mg/L	0.1351	19.65	mg/L	0.675	3.44%
Mo 202.031†	71.5	0.00334	mg/L	0.000067	0.01670	mg/L	0.000336	2.01%
Na 589.592†	9652.9	0.7576	mg/L	0.02350	3.788	mg/L	0.1175	3.10%
Na 330.237†	14.0	0.4651	mg/L	0.07466	2.325	mg/L	0.3733	16.05%
Ni 231.604†	327.7	0.07952	mg/L	0.001437	0.3976	mg/L	0.00718	1.81%
Pb 220.353†	13321.3	1.678	mg/L	0.0140	8.388	mg/L	0.0700	0.83%
Sb 206.836†	32.1	0.01006	mg/L	0.001184	0.05031	mg/L	0.005919	11.76%
Se 196.026†	15.8	0.01051	mg/L	0.006330	0.05254	mg/L	0.031650	60.24%
Si 288.158†	2784.0	1.296	mg/L	0.0210	6.478	mg/L	0.1050	1.62%
Sn 189.927†	-15.7	-0.00115	mg/L	0.001510	-0.00574	mg/L	0.007552	131.63%
Sr 421.552†	199481.4	0.2130	mg/L	0.00707	1.065	mg/L	0.0353	3.32%
Ti 334.903†	50922.2	2.442	mg/L	0.0784	12.21	mg/L	0.392	3.21%
Tl 190.801†	-15.6	0.00256	mg/L	0.002278	0.01280	mg/L	0.011388	88.96%
V 292.402†	15097.3	0.1118	mg/L	0.00059	0.5591	mg/L	0.00295	0.53%
Zn 206.200†	7132.2	1.759	mg/L	0.0339	8.797	mg/L	0.1695	1.93%

Sequence No.: 9
Sample ID: VR34 K SWC

Autosampler Location: 332
Date Collected: 11/16/2012 12:44:19 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2309748.8	102.3	%	1.53				1.49%
ScR 361.383	294996.2	103.2	%	1.72				1.67%
Ag 328.068†	64.4	0.00040	mg/L	0.000132	0.00202	mg/L	0.000661	32.78%
Al 308.215†	113813.1	63.90	mg/L	1.053	319.5	mg/L	5.26	1.65%
As 188.979†	54.4	0.09574	mg/L	0.001976	0.4787	mg/L	0.00988	2.06%
B 249.677†	45.3	0.00568	mg/L	0.000578	0.02840	mg/L	0.002892	10.18%
Ba 233.527†	6170.5	1.344	mg/L	0.0174	6.719	mg/L	0.0869	1.29%
Be 313.042†	1491.8	0.00219	mg/L	0.000044	0.01094	mg/L	0.000218	2.00%
Ca 317.933†	268883.1	18.93	mg/L	0.316	94.65	mg/L	1.582	1.67%
Cd 228.802†	1468.8	0.04531	mg/L	0.000875	0.2265	mg/L	0.00438	1.93%
Co 228.616†	1845.2	0.04630	mg/L	0.000517	0.2315	mg/L	0.00258	1.12%
Cr 267.716†	990.4	0.1605	mg/L	0.00185	0.8027	mg/L	0.00926	1.15%
Cu 324.752†	33656.3	0.1332	mg/L	0.00113	0.6658	mg/L	0.00567	0.85%
Fe 273.955†	131109.4	100.00	mg/L	1.968	500.0	mg/L	9.84	1.97%
K 766.490†	17936.1	8.999	mg/L	0.1241	44.99	mg/L	0.620	1.38%
Mg 279.077†	36157.4	24.47	mg/L	0.430	122.3	mg/L	2.15	1.76%
Mn 257.610†	182635.9	5.049	mg/L	0.0941	25.24	mg/L	0.470	1.86%
Mo 202.031†	84.4	0.00399	mg/L	0.000498	0.01997	mg/L	0.002490	12.47%
Na 589.592†	7073.5	0.5552	mg/L	0.01046	2.776	mg/L	0.0523	1.88%
Na 330.237†	4.9	0.1338	mg/L	0.08275	0.6688	mg/L	0.41374	61.87%
Ni 231.604†	408.7	0.09918	mg/L	0.000712	0.4959	mg/L	0.00356	0.72%
Pb 220.353†	14254.9	1.793	mg/L	0.0168	8.964	mg/L	0.0842	0.94%
Sb 206.836†	34.1	0.00964	mg/L	0.001280	0.04820	mg/L	0.006400	13.28%
Se 196.026†	14.5	0.00966	mg/L	0.000331	0.04828	mg/L	0.001654	3.43%
Si 288.158†	1581.2	0.7378	mg/L	0.01258	3.689	mg/L	0.0629	1.70%
Sn 189.927†	-16.7	-0.00155	mg/L	0.000187	-0.00775	mg/L	0.000935	12.06%
Sr 421.552†	175140.1	0.1870	mg/L	0.00282	0.9348	mg/L	0.01410	1.51%
Ti 334.903†	49684.7	2.383	mg/L	0.0416	11.92	mg/L	0.208	1.75%
Tl 190.801†	-22.4	0.00113	mg/L	0.000607	0.00563	mg/L	0.003037	53.94%
V 292.402†	17463.0	0.1300	mg/L	0.00083	0.6498	mg/L	0.00417	0.64%
Zn 206.200†	7139.5	1.761	mg/L	0.0288	8.806	mg/L	0.1442	1.64%

Sequence No.: 10
Sample ID: VR34 L SWC

Autosampler Location: 333
Date Collected: 11/16/2012 12:48:20 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 L SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2282220.5	101.1	%	0.92				0.91%
ScR 361.383	289610.8	101.3	%	0.55				0.54%
Ag 328.068†	-86.4	-0.00047	mg/L	0.000156	-0.00235	mg/L	0.000781	33.19%
Al 308.215†	43558.6	24.46	mg/L	0.138	122.3	mg/L	0.69	0.57%
As 188.979†	-23.6	0.02355	mg/L	0.001196	0.1177	mg/L	0.00598	5.08%
B 249.677†	6.3	0.00078	mg/L	0.000441	0.00388	mg/L	0.002205	56.84%
Ba 233.527†	835.4	0.1783	mg/L	0.00139	0.8916	mg/L	0.00696	0.78%
Be 313.042†	598.9	0.00087	mg/L	0.000012	0.00436	mg/L	0.000062	1.43%
Ca 317.933†	91328.8	6.430	mg/L	0.0408	32.15	mg/L	0.204	0.64%
Cd 228.802†	217.7	0.00664	mg/L	0.000047	0.03319	mg/L	0.000237	0.71%
Co 228.616†	488.0	0.01089	mg/L	0.000134	0.05446	mg/L	0.000672	1.23%
Cr 267.716†	241.8	0.03949	mg/L	0.000268	0.1974	mg/L	0.00134	0.68%
Cu 324.752†	7769.4	0.03113	mg/L	0.000106	0.1556	mg/L	0.00053	0.34%
Fe 273.955†	46748.3	35.65	mg/L	0.089	178.3	mg/L	0.44	0.25%
K 766.490†	4855.8	2.436	mg/L	0.0424	12.18	mg/L	0.212	1.74%
Mg 279.077†	11818.3	7.995	mg/L	0.0583	39.98	mg/L	0.292	0.73%
Mn 257.610†	23625.1	0.6532	mg/L	0.00311	3.266	mg/L	0.0156	0.48%
Mo 202.031†	18.7	0.00086	mg/L	0.000144	0.00430	mg/L	0.000720	16.75%
Na 589.592†	3246.8	0.2548	mg/L	0.00166	1.274	mg/L	0.0083	0.65%
Na 330.237†	-10.6	-0.1991	mg/L	0.12922	-0.9956	mg/L	0.64610	64.90%
Ni 231.604†	114.2	0.02771	mg/L	0.000665	0.1386	mg/L	0.00333	2.40%
Pb 220.353†	2669.1	0.3380	mg/L	0.00284	1.690	mg/L	0.0142	0.84%
Sb 206.836†	11.0	0.00357	mg/L	0.001534	0.01785	mg/L	0.007669	42.96%
Se 196.026†	8.3	0.00550	mg/L	0.002813	0.02750	mg/L	0.014063	51.15%
Si 288.158†	2652.5	1.233	mg/L	0.0125	6.167	mg/L	0.0624	1.01%
Sn 189.927†	-12.3	-0.00217	mg/L	0.000909	-0.01087	mg/L	0.004544	41.82%
Sr 421.552†	78537.1	0.08384	mg/L	0.000373	0.4192	mg/L	0.00186	0.44%
Ti 334.903†	26563.7	1.274	mg/L	0.0057	6.371	mg/L	0.0286	0.45%
Tl 190.801†	-4.8	0.00163	mg/L	0.000417	0.00813	mg/L	0.002085	25.64%
V 292.402†	8416.5	0.06257	mg/L	0.000232	0.3128	mg/L	0.00116	0.37%
Zn 206.200†	1461.1	0.3604	mg/L	0.00236	1.802	mg/L	0.0118	0.66%

Sequence No.: 11
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 11/16/2012 12:52:20 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2271379.0	100.6	%	0.65				0.65%
ScR 361.383	283879.8	99.28	%	0.906				0.91%
Ag 328.068†	177762.0	1.006	mg/L	0.0075	1.006	mg/L	0.0075	0.75%
Al 308.215†	3686.3	2.036	mg/L	0.0145	2.036	mg/L	0.0145	0.71%
As 188.979†	3666.4	1.966	mg/L	0.0084	1.966	mg/L	0.0084	0.43%
B 249.677†	7593.7	0.9682	mg/L	0.00319	0.9682	mg/L	0.00319	0.33%
Ba 233.527†	4709.9	1.038	mg/L	0.0056	1.038	mg/L	0.0056	0.54%
Be 313.042†	634401.2	0.9537	mg/L	0.00397	0.9537	mg/L	0.00397	0.42%
Ca 317.933†	27834.2	1.960	mg/L	0.0130	1.960	mg/L	0.0130	0.66%
Cd 228.802†	32952.3	1.028	mg/L	0.0061	1.028	mg/L	0.0061	0.59%
Co 228.616†	35719.9	1.011	mg/L	0.0073	1.011	mg/L	0.0073	0.72%
Cr 267.716†	6442.4	1.037	mg/L	0.0086	1.037	mg/L	0.0086	0.83%
Cu 324.752†	258063.9	0.9920	mg/L	0.00265	0.9920	mg/L	0.00265	0.27%
Fe 273.955†	2725.4	2.072	mg/L	0.0195	2.072	mg/L	0.0195	0.94%
K 766.490†	39862.4	20.00	mg/L	0.111	20.00	mg/L	0.111	0.55%
Mg 279.077†	3000.3	2.042	mg/L	0.0175	2.042	mg/L	0.0175	0.86%
Mn 257.610†	36138.2	0.9992	mg/L	0.00687	0.9992	mg/L	0.00687	0.69%
Mo 202.031†	20005.7	0.9969	mg/L	0.00663	0.9969	mg/L	0.00663	0.67%
Na 589.592†	626922.5	49.20	mg/L	0.211	49.20	mg/L	0.211	0.43%
Na 330.237†	1503.0	52.21	mg/L	0.258	52.21	mg/L	0.258	0.49%
Ni 231.604†	4039.9	0.9806	mg/L	0.00545	0.9806	mg/L	0.00545	0.56%
Pb 220.353†	15527.9	1.942	mg/L	0.0126	1.942	mg/L	0.0126	0.65%
Sb 206.836†	6929.9	2.118	mg/L	0.0123	2.118	mg/L	0.0123	0.58%
Se 196.026†	2868.5	1.926	mg/L	0.0076	1.926	mg/L	0.0076	0.40%
Si 288.158†	4506.9	2.093	mg/L	0.0132	2.093	mg/L	0.0132	0.63%
Sn 189.927†	3923.3	1.008	mg/L	0.0049	1.008	mg/L	0.0049	0.48%
Sr 421.552†	899750.8	0.9605	mg/L	0.00554	0.9605	mg/L	0.00554	0.58%
Ti 334.903†	21333.5	1.022	mg/L	0.0037	1.022	mg/L	0.0037	0.36%
Tl 190.801†	4986.6	1.942	mg/L	0.0113	1.942	mg/L	0.0113	0.58%
V 292.402†	133740.9	1.026	mg/L	0.0087	1.026	mg/L	0.0087	0.85%
Zn 206.200†	4088.0	1.008	mg/L	0.0059	1.008	mg/L	0.0059	0.58%

Sequence No.: 12
Sample ID: CB 7

Autosampler Location: 1
Date Collected: 11/16/2012 12:57:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2288125.4	101.4	%	0.81				0.80%
ScR 361.383	290668.7	101.7	%	0.61				0.60%
Ag 328.068†	43.1	0.00024	mg/L	0.000211	0.00024	mg/L	0.000211	86.31%
Al 308.215†	28.6	0.01607	mg/L	0.012539	0.01607	mg/L	0.012539	78.05%
As 188.979†	0.4	0.00026	mg/L	0.000533	0.00026	mg/L	0.000533	207.15%
B 249.677†	10.4	0.00133	mg/L	0.000523	0.00133	mg/L	0.000523	39.33%
Ba 233.527†	-0.7	-0.00015	mg/L	0.000379	-0.00015	mg/L	0.000379	249.09%
Be 313.042†	166.7	0.00025	mg/L	0.000057	0.00025	mg/L	0.000057	22.54%
Ca 317.933†	70.2	0.00494	mg/L	0.001525	0.00494	mg/L	0.001525	30.87%
Cd 228.802†	-6.2	-0.00020	mg/L	0.000104	-0.00020	mg/L	0.000104	52.34%
Co 228.616†	-11.1	-0.00032	mg/L	0.000187	-0.00032	mg/L	0.000187	58.88%
Cr 267.716†	-9.6	-0.00154	mg/L	0.000328	-0.00154	mg/L	0.000328	21.25%
Cu 324.752†	37.6	0.00014	mg/L	0.000141	0.00014	mg/L	0.000141	97.38%
Fe 273.955†	18.1	0.01382	mg/L	0.003927	0.01382	mg/L	0.003927	28.41%
K 766.490†	-9.9	-0.00495	mg/L	0.006149	-0.00495	mg/L	0.006149	124.14%
Mg 279.077†	1.8	0.00120	mg/L	0.003141	0.00120	mg/L	0.003141	260.68%
Mn 257.610†	14.6	0.00040	mg/L	0.000180	0.00040	mg/L	0.000180	44.81%
Mo 202.031†	13.2	0.00066	mg/L	0.000139	0.00066	mg/L	0.000139	21.16%
Na 589.592†	119.4	0.00937	mg/L	0.003559	0.00937	mg/L	0.003559	37.99%
Na 330.237†	-5.8	-0.2026	mg/L	0.29193	-0.2026	mg/L	0.29193	144.10%
Ni 231.604†	-4.0	-0.00097	mg/L	0.000672	-0.00097	mg/L	0.000672	69.32%
Pb 220.353†	4.4	0.00055	mg/L	0.001626	0.00055	mg/L	0.001626	298.23%
Sb 206.836†	5.8	0.00180	mg/L	0.002170	0.00180	mg/L	0.002170	120.88%
Se 196.026†	4.1	0.00278	mg/L	0.002003	0.00278	mg/L	0.002003	72.00%
Si 288.158†	5.5	0.00258	mg/L	0.003362	0.00258	mg/L	0.003362	130.55%
Sn 189.927†	-0.7	-0.00018	mg/L	0.000359	-0.00018	mg/L	0.000359	198.35%
Sr 421.552†	224.5	0.00024	mg/L	0.000034	0.00024	mg/L	0.000034	14.39%
Ti 334.903†	27.6	0.00132	mg/L	0.000364	0.00132	mg/L	0.000364	27.52%
Tl 190.801†	3.3	0.00131	mg/L	0.002660	0.00131	mg/L	0.002660	202.76%
V 292.402†	-18.6	-0.00015	mg/L	0.000120	-0.00015	mg/L	0.000120	80.17%
Zn 206.200†	-0.1	-0.00004	mg/L	0.000875	-0.00004	mg/L	0.000875	>999.9%

Analysis Begun

Start Time: 11/16/2012 1:29:48 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV8
Autosampler Location: 7
Date Collected: 11/16/2012 1:29:49 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2250323.7	99.70	%	0.640				0.64%
ScR 361.383	286872.2	100.3	%	0.98				0.98%
Ag 328.068†	178929.9	1.013	mg/L	0.0050	1.013	mg/L	0.0050	0.49%
Al 308.215†	3627.6	2.002	mg/L	0.0139	2.002	mg/L	0.0139	0.69%
As 188.979†	3690.2	1.978	mg/L	0.0046	1.978	mg/L	0.0046	0.23%
B 249.677†	7524.2	0.9593	mg/L	0.00606	0.9593	mg/L	0.00606	0.63%
Ba 233.527†	4642.5	1.023	mg/L	0.0099	1.023	mg/L	0.0099	0.97%
Be 313.042†	632185.6	0.9504	mg/L	0.00674	0.9504	mg/L	0.00674	0.71%
Ca 317.933†	27505.4	1.936	mg/L	0.0197	1.936	mg/L	0.0197	1.02%
Cd 228.802†	33305.7	1.039	mg/L	0.0037	1.039	mg/L	0.0037	0.36%
Co 228.616†	35983.3	1.018	mg/L	0.0022	1.018	mg/L	0.0022	0.22%
Cr 267.716†	6385.1	1.027	mg/L	0.0054	1.027	mg/L	0.0054	0.52%
Cu 324.752†	268995.9	1.034	mg/L	0.0035	1.034	mg/L	0.0035	0.34%
Fe 273.955†	2692.9	2.047	mg/L	0.0083	2.047	mg/L	0.0083	0.41%
K 766.490†	39440.5	19.79	mg/L	0.211	19.79	mg/L	0.211	1.07%
Mg 279.077†	2964.8	2.018	mg/L	0.0104	2.018	mg/L	0.0104	0.52%
Mn 257.610†	35892.9	0.9925	mg/L	0.00745	0.9925	mg/L	0.00745	0.75%
Mo 202.031†	20199.4	1.007	mg/L	0.0005	1.007	mg/L	0.0005	0.05%
Na 589.592†	620351.5	48.69	mg/L	0.516	48.69	mg/L	0.516	1.06%
Na 330.237†	1494.4	51.91	mg/L	0.128	51.91	mg/L	0.128	0.25%
Ni 231.604†	3995.5	0.9698	mg/L	0.00503	0.9698	mg/L	0.00503	0.52%
Pb 220.353†	15686.1	1.961	mg/L	0.0049	1.961	mg/L	0.0049	0.25%
Sb 206.836†	6975.8	2.133	mg/L	0.0102	2.133	mg/L	0.0102	0.48%
Se 196.026†	2895.2	1.943	mg/L	0.0062	1.943	mg/L	0.0062	0.32%
Si 288.158†	4485.2	2.083	mg/L	0.0194	2.083	mg/L	0.0194	0.93%
Sn 189.927†	3971.3	1.020	mg/L	0.0038	1.020	mg/L	0.0038	0.37%
Sr 421.552†	891792.3	0.9520	mg/L	0.00878	0.9520	mg/L	0.00878	0.92%
Ti 334.903†	21200.3	1.016	mg/L	0.0100	1.016	mg/L	0.0100	0.98%
Tl 190.801†	5009.5	1.951	mg/L	0.0031	1.951	mg/L	0.0031	0.16%
V 292.402†	134916.3	1.035	mg/L	0.0039	1.035	mg/L	0.0039	0.38%
Zn 206.200†	4035.8	0.9953	mg/L	0.00587	0.9953	mg/L	0.00587	0.59%

Sequence No.: 2
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 11/16/2012 1:34:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2270851.9	100.6	%	0.79				0.78%
ScR 361.383	291826.6	102.1	%	1.50				1.47%
Ag 328.068†	95.3	0.00054	mg/L	0.000410	0.00054	mg/L	0.000410	75.94%
Al 308.215†	27.0	0.01515	mg/L	0.013052	0.01515	mg/L	0.013052	86.15%
As 188.979†	0.0	0.00005	mg/L	0.000645	0.00005	mg/L	0.000645	>999.9%
B 249.677†	9.5	0.00121	mg/L	0.000374	0.00121	mg/L	0.000374	30.85%
Ba 233.527†	-5.3	-0.00118	mg/L	0.000737	-0.00118	mg/L	0.000737	62.57%
Be 313.042†	203.7	0.00031	mg/L	0.000032	0.00031	mg/L	0.000032	10.36%
Ca 317.933†	11.4	0.00080	mg/L	0.000441	0.00080	mg/L	0.000441	54.92%
Cd 228.802†	1.1	0.00003	mg/L	0.000096	0.00003	mg/L	0.000096	287.77%
Co 228.616†	-7.5	-0.00021	mg/L	0.000113	-0.00021	mg/L	0.000113	52.84%
Cr 267.716†	-4.6	-0.00074	mg/L	0.000589	-0.00074	mg/L	0.000589	79.23%
Cu 324.752†	32.7	0.00013	mg/L	0.000083	0.00013	mg/L	0.000083	66.01%
Fe 273.955†	2.8	0.00211	mg/L	0.001434	0.00211	mg/L	0.001434	68.14%
K 766.490†	-1.2	-0.00059	mg/L	0.010475	-0.00059	mg/L	0.010475	>999.9%
Mg 279.077†	2.1	0.00140	mg/L	0.008105	0.00140	mg/L	0.008105	580.35%
Mn 257.610†	-4.6	-0.00013	mg/L	0.000103	-0.00013	mg/L	0.000103	80.87%
Mo 202.031†	19.0	0.00095	mg/L	0.000164	0.00095	mg/L	0.000164	17.30%
Na 589.592†	173.1	0.01359	mg/L	0.004605	0.01359	mg/L	0.004605	33.89%
Na 330.237†	-10.7	-0.3717	mg/L	0.28520	-0.3717	mg/L	0.28520	76.73%
Ni 231.604†	-3.8	-0.00092	mg/L	0.000827	-0.00092	mg/L	0.000827	90.27%
Pb 220.353†	8.7	0.00108	mg/L	0.000513	0.00108	mg/L	0.000513	47.29%
Sb 206.836†	12.6	0.00385	mg/L	0.001067	0.00385	mg/L	0.001067	27.69%
Se 196.026†	3.1	0.00205	mg/L	0.002185	0.00205	mg/L	0.002185	106.32%
Si 288.158†	6.4	0.00298	mg/L	0.003775	0.00298	mg/L	0.003775	126.72%
Sn 189.927†	-0.4	-0.00009	mg/L	0.000301	-0.00009	mg/L	0.000301	330.69%
Sr 421.552†	251.3	0.00027	mg/L	0.000027	0.00027	mg/L	0.000027	9.92%
Ti 334.903†	22.1	0.00106	mg/L	0.000464	0.00106	mg/L	0.000464	43.82%
Tl 190.801†	2.6	0.00102	mg/L	0.000837	0.00102	mg/L	0.000837	81.69%
V 292.402†	-16.1	-0.00013	mg/L	0.000099	-0.00013	mg/L	0.000099	78.47%
Zn 206.200†	-0.9	-0.00022	mg/L	0.000593	-0.00022	mg/L	0.000593	266.23%

Sequence No.: 3
Sample ID: VR34 MB1 SWC

Autosampler Location: 334
Date Collected: 11/16/2012 1:39:11 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR34 MB1 SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2301258.3	102.0	%	0.50				0.49%
ScR 361.383	293136.9	102.5	%	1.94				1.90%
Ag 328.068†	31.2	0.00018	mg/L	0.000268	0.00035	mg/L	0.000536	152.08%
Al 308.215†	24.2	0.01357	mg/L	0.003529	0.02713	mg/L	0.007058	26.01%
As 188.979†	-0.6	-0.00032	mg/L	0.001580	-0.00063	mg/L	0.003161	497.93%
B 249.677†	1.0	0.00013	mg/L	0.000562	0.00025	mg/L	0.001123	445.81%
Ba 233.527†	-6.8	-0.00149	mg/L	0.000651	-0.00298	mg/L	0.001302	43.67%
Be 313.042†	12.1	0.00002	mg/L	0.000039	0.00004	mg/L	0.000079	215.27%
Ca 317.933†	168.9	0.01189	mg/L	0.000906	0.02378	mg/L	0.001811	7.62%
Cd 228.802†	-14.0	-0.00044	mg/L	0.000011	-0.00088	mg/L	0.000021	2.43%
Co 228.616†	-11.8	-0.00034	mg/L	0.000141	-0.00067	mg/L	0.000281	41.68%
Cr 267.716†	-6.9	-0.00112	mg/L	0.001118	-0.00224	mg/L	0.002237	99.99%
Cu 324.752†	50.9	0.00020	mg/L	0.000094	0.00039	mg/L	0.000188	48.11%
Fe 273.955†	6.7	0.00515	mg/L	0.001745	0.01029	mg/L	0.003490	33.91%
K 766.490†	-39.3	-0.01974	mg/L	0.001882	-0.03948	mg/L	0.003764	9.53%
Mg 279.077†	2.8	0.00189	mg/L	0.002039	0.00378	mg/L	0.004079	107.93%
Mn 257.610†	4.6	0.00013	mg/L	0.000063	0.00025	mg/L	0.000126	49.90%
Mo 202.031†	5.0	0.00025	mg/L	0.000222	0.00049	mg/L	0.000445	90.18%
Na 589.592†	37.5	0.00294	mg/L	0.003772	0.00589	mg/L	0.007543	128.08%
Na 330.237†	-6.7	-0.2333	mg/L	0.59278	-0.4666	mg/L	1.18556	254.11%
Ni 231.604†	-3.8	-0.00091	mg/L	0.001175	-0.00182	mg/L	0.002351	128.84%
Pb 220.353†	-3.9	-0.00049	mg/L	0.001032	-0.00098	mg/L	0.002065	211.06%
Sb 206.836†	3.4	0.00106	mg/L	0.000661	0.00212	mg/L	0.001322	62.41%
Se 196.026†	6.1	0.00412	mg/L	0.003205	0.00825	mg/L	0.006410	77.71%
Si 288.158†	-0.1	-0.00003	mg/L	0.001033	-0.00006	mg/L	0.002066	>999.9%
Sn 189.927†	-1.2	-0.00030	mg/L	0.000650	-0.00060	mg/L	0.001300	216.66%
Sr 421.552†	51.9	0.00006	mg/L	0.000021	0.00011	mg/L	0.000043	38.36%
Ti 334.903†	19.5	0.00094	mg/L	0.000492	0.00187	mg/L	0.000984	52.52%
Tl 190.801†	2.7	0.00106	mg/L	0.001910	0.00211	mg/L	0.003820	180.70%
V 292.402†	-42.2	-0.00033	mg/L	0.000093	-0.00065	mg/L	0.000187	28.53%
Zn 206.200†	6.8	0.00167	mg/L	0.000109	0.00334	mg/L	0.000219	6.55%

Sequence No.: 4
Sample ID: VR34 B SWC

Autosampler Location: 335
Date Collected: 11/16/2012 1:43:28 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2254872.9	99.90	%	2.121				2.12%
ScR 361.383	290707.9	101.7	%	0.95				0.94%
Ag 328.068†	-74.1	-0.00037	mg/L	0.000025	-0.00186	mg/L	0.000125	6.72%
Al 308.215†	135375.3	76.01	mg/L	0.697	380.0	mg/L	3.48	0.92%
As 188.979†	-59.6	0.05882	mg/L	0.002598	0.2941	mg/L	0.01299	4.42%
B 249.677†	82.3	0.01039	mg/L	0.000514	0.05196	mg/L	0.002571	4.95%
Ba 233.527†	7133.7	1.557	mg/L	0.0093	7.786	mg/L	0.0466	0.60%
Be 313.042†	1624.0	0.00237	mg/L	0.000033	0.01185	mg/L	0.000164	1.39%
Ca 317.933†	408373.5	28.75	mg/L	0.293	143.8	mg/L	1.46	1.02%
Cd 228.802†	758.8	0.02339	mg/L	0.000375	0.1170	mg/L	0.00187	1.60%
Co 228.616†	1853.1	0.04497	mg/L	0.000599	0.2248	mg/L	0.00299	1.33%
Cr 267.716†	1621.9	0.2612	mg/L	0.00169	1.306	mg/L	0.0085	0.65%
Cu 324.752†	26074.5	0.1035	mg/L	0.00168	0.5173	mg/L	0.00842	1.63%
Fe 273.955†	122189.8	93.19	mg/L	1.201	466.0	mg/L	6.00	1.29%
K 766.490†	15616.2	7.835	mg/L	0.0864	39.17	mg/L	0.432	1.10%
Mg 279.077†	47454.1	32.13	mg/L	0.318	160.7	mg/L	1.59	0.99%
Mn 257.610†	175697.3	4.857	mg/L	0.0480	24.28	mg/L	0.240	0.99%
Mo 202.031†	65.9	0.00296	mg/L	0.000269	0.01480	mg/L	0.001343	9.08%
Na 589.592†	7914.8	0.6212	mg/L	0.00398	3.106	mg/L	0.0199	0.64%
Na 330.237†	-5.4	0.2016	mg/L	0.26383	1.008	mg/L	1.3191	130.85%
Ni 231.604†	564.0	0.1368	mg/L	0.00039	0.6842	mg/L	0.00195	0.28%
Pb 220.353†	8718.2	1.104	mg/L	0.0154	5.521	mg/L	0.0768	1.39%
Sb 206.836†	28.5	0.00692	mg/L	0.001628	0.03461	mg/L	0.008141	23.52%
Se 196.026†	10.7	0.00708	mg/L	0.004133	0.03542	mg/L	0.020665	58.34%
Si 288.158†	2489.7	1.161	mg/L	0.0195	5.804	mg/L	0.0977	1.68%
Sn 189.927†	-32.4	-0.00426	mg/L	0.000317	-0.02128	mg/L	0.001584	7.44%
Sr 421.552†	263831.2	0.2816	mg/L	0.00253	1.408	mg/L	0.0127	0.90%
Ti 334.903†	67274.0	3.227	mg/L	0.0270	16.13	mg/L	0.135	0.84%
Tl 190.801†	-16.7	0.00248	mg/L	0.001744	0.01239	mg/L	0.008721	70.38%
V 292.402†	21302.1	0.1594	mg/L	0.00264	0.7972	mg/L	0.01322	1.66%
Zn 206.200†	4264.1	1.052	mg/L	0.0080	5.259	mg/L	0.0402	0.77%

Sequence No.: 5
Sample ID: VR34 C SWC

Autosampler Location: 336
Date Collected: 11/16/2012 1:47:29 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 C SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2265023.8	100.3	%	0.96				0.96%
ScR 361.383	287137.0	100.4	%	2.07				2.06%
Ag 328.068†	-95.5	-0.00051	mg/L	0.000186	-0.00256	mg/L	0.000932	36.40%
Al 308.215†	103719.0	58.23	mg/L	1.290	291.2	mg/L	6.45	2.21%
As 188.979†	-10.0	0.06078	mg/L	0.001037	0.3039	mg/L	0.00518	1.71%
B 249.677†	65.6	0.00831	mg/L	0.001523	0.04153	mg/L	0.007615	18.33%
Ba 233.527†	3532.0	0.7679	mg/L	0.00911	3.840	mg/L	0.0456	1.19%
Be 313.042†	1374.3	0.00202	mg/L	0.000061	0.01009	mg/L	0.000304	3.01%
Ca 317.933†	290441.7	20.45	mg/L	0.499	102.2	mg/L	2.50	2.44%
Cd 228.802†	561.9	0.01720	mg/L	0.000576	0.08602	mg/L	0.002878	3.35%
Co 228.616†	1126.6	0.02649	mg/L	0.000794	0.1324	mg/L	0.00397	3.00%
Cr 267.716†	401.4	0.06549	mg/L	0.001016	0.3275	mg/L	0.00508	1.55%
Cu 324.752†	19581.0	0.07757	mg/L	0.002316	0.3879	mg/L	0.01158	2.99%
Fe 273.955†	85210.1	64.99	mg/L	1.748	324.9	mg/L	8.74	2.69%
K 766.490†	11372.7	5.706	mg/L	0.1368	28.53	mg/L	0.684	2.40%
Mg 279.077†	20509.6	13.87	mg/L	0.309	69.37	mg/L	1.546	2.23%
Mn 257.610†	93664.3	2.589	mg/L	0.0642	12.95	mg/L	0.321	2.48%
Mo 202.031†	43.7	0.00195	mg/L	0.000469	0.00977	mg/L	0.002347	24.02%
Na 589.592†	8845.7	0.6943	mg/L	0.01632	3.471	mg/L	0.0816	2.35%
Na 330.237†	-0.0	0.2485	mg/L	0.10897	1.242	mg/L	0.5448	43.85%
Ni 231.604†	251.0	0.06091	mg/L	0.000828	0.3046	mg/L	0.00414	1.36%
Pb 220.353†	4519.6	0.5761	mg/L	0.01652	2.881	mg/L	0.0826	2.87%
Sb 206.836†	12.6	0.00428	mg/L	0.001301	0.02138	mg/L	0.006504	30.41%
Se 196.026†	12.9	0.00861	mg/L	0.000467	0.04307	mg/L	0.002336	5.43%
Si 288.158†	1888.7	0.8793	mg/L	0.01774	4.396	mg/L	0.0887	2.02%
Sn 189.927†	-25.6	-0.00368	mg/L	0.000959	-0.01839	mg/L	0.004793	26.07%
Sr 421.552†	241094.6	0.2574	mg/L	0.00594	1.287	mg/L	0.0297	2.31%
Ti 334.903†	49038.8	2.352	mg/L	0.0511	11.76	mg/L	0.256	2.17%
Tl 190.801†	-5.0	0.00443	mg/L	0.001681	0.02217	mg/L	0.008406	37.92%
V 292.402†	12992.4	0.09628	mg/L	0.002919	0.4814	mg/L	0.01460	3.03%
Zn 206.200†	3523.6	0.8692	mg/L	0.01024	4.346	mg/L	0.0512	1.18%

Sequence No.: 6
Sample ID: VR34 D SWC

Autosampler Location: 337
Date Collected: 11/16/2012 1:51:30 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 D SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2284629.6	101.2	%	0.91				0.90%
ScR 361.383	294142.0	102.9	%	0.57				0.55%
Ag 328.068†	22.8	0.00017	mg/L	0.000033	0.00083	mg/L	0.000163	19.55%
Al 308.215†	107595.8	60.41	mg/L	0.163	302.0	mg/L	0.82	0.27%
As 188.979†	-21.3	0.07198	mg/L	0.003302	0.3599	mg/L	0.01651	4.59%
B 249.677†	89.4	0.01132	mg/L	0.000746	0.05658	mg/L	0.003728	6.59%
Ba 233.527†	3833.3	0.8302	mg/L	0.00460	4.151	mg/L	0.0230	0.55%
Be 313.042†	1394.4	0.00203	mg/L	0.000012	0.01017	mg/L	0.000061	0.60%
Ca 317.933†	332365.6	23.40	mg/L	0.056	117.0	mg/L	0.28	0.24%
Cd 228.802†	1059.5	0.03274	mg/L	0.000258	0.1637	mg/L	0.00129	0.79%
Co 228.616†	1637.1	0.03945	mg/L	0.000182	0.1973	mg/L	0.00091	0.46%
Cr 267.716†	796.5	0.1292	mg/L	0.00046	0.6459	mg/L	0.00230	0.36%
Cu 324.752†	23393.3	0.09315	mg/L	0.000668	0.4658	mg/L	0.00334	0.72%
Fe 273.955†	118492.3	90.37	mg/L	0.325	451.9	mg/L	1.62	0.36%
K 766.490†	20052.1	10.06	mg/L	0.073	50.30	mg/L	0.366	0.73%
Mg 279.077†	34370.9	23.26	mg/L	0.086	116.3	mg/L	0.43	0.37%
Mn 257.610†	119094.1	3.292	mg/L	0.0092	16.46	mg/L	0.046	0.28%
Mo 202.031†	59.7	0.00271	mg/L	0.000442	0.01356	mg/L	0.002211	16.30%
Na 589.592†	8462.4	0.6642	mg/L	0.00379	3.321	mg/L	0.0189	0.57%
Na 330.237†	-6.3	-0.02868	mg/L	0.052591	-0.1434	mg/L	0.26296	183.35%
Ni 231.604†	392.5	0.09523	mg/L	0.002472	0.4762	mg/L	0.01236	2.60%
Pb 220.353†	11750.1	1.479	mg/L	0.0118	7.397	mg/L	0.0589	0.80%
Sb 206.836†	29.9	0.00906	mg/L	0.000703	0.04529	mg/L	0.003513	7.76%
Se 196.026†	11.0	0.00726	mg/L	0.001403	0.03631	mg/L	0.007017	19.32%
Si 288.158†	1543.5	0.7201	mg/L	0.00616	3.600	mg/L	0.0308	0.86%
Sn 189.927†	-15.1	-0.00050	mg/L	0.000410	-0.00248	mg/L	0.002051	82.54%
Sr 421.552†	252128.4	0.2692	mg/L	0.00091	1.346	mg/L	0.0045	0.34%
Ti 334.903†	61716.9	2.960	mg/L	0.0090	14.80	mg/L	0.045	0.30%
Tl 190.801†	-7.8	0.00587	mg/L	0.001559	0.02935	mg/L	0.007795	26.56%
V 292.402†	17263.5	0.1280	mg/L	0.00109	0.6402	mg/L	0.00545	0.85%
Zn 206.200†	5962.1	1.471	mg/L	0.0060	7.354	mg/L	0.0299	0.41%

Sequence No.: 7
Sample ID: VR34 A-L SWC

Autosampler Location: 338
Date Collected: 11/16/2012 1:55:31 PM
Data Type: Original

Dilution: 25.000000X

Nebulizer Parameters: VR34 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2334453.9	103.4	%	1.13				1.09%
ScR 361.383	299094.2	104.6	%	0.76				0.72%
Ag 328.068†	48.3	0.00028	mg/L	0.000048	0.00697	mg/L	0.001195	17.13%
Al 308.215†	18274.0	10.26	mg/L	0.211	256.5	mg/L	5.27	2.05%
As 188.979†	1.6	0.01359	mg/L	0.001432	0.3397	mg/L	0.03581	10.54%
B 249.677†	16.8	0.00212	mg/L	0.000297	0.05312	mg/L	0.007436	14.00%
Ba 233.527†	758.2	0.1646	mg/L	0.00420	4.114	mg/L	0.1050	2.55%
Be 313.042†	273.4	0.00040	mg/L	0.000003	0.01005	mg/L	0.000066	0.66%
Ca 317.933†	71770.3	5.053	mg/L	0.1113	126.3	mg/L	2.78	2.20%
Cd 228.802†	206.8	0.00639	mg/L	0.000300	0.1597	mg/L	0.00751	4.70%
Co 228.616†	254.3	0.00611	mg/L	0.000352	0.1528	mg/L	0.00881	5.77%
Cr 267.716†	113.1	0.01834	mg/L	0.000407	0.4586	mg/L	0.01017	2.22%
Cu 324.752†	4046.4	0.01612	mg/L	0.000502	0.4031	mg/L	0.01255	3.11%
Fe 273.955†	20501.2	15.64	mg/L	0.311	390.9	mg/L	7.78	1.99%
K 766.490†	3170.9	1.591	mg/L	0.0330	39.77	mg/L	0.824	2.07%
Mg 279.077†	5949.6	4.026	mg/L	0.0876	100.7	mg/L	2.19	2.18%
Mn 257.610†	30005.1	0.8294	mg/L	0.01613	20.74	mg/L	0.403	1.95%
Mo 202.031†	6.0	0.00024	mg/L	0.000049	0.00604	mg/L	0.001227	20.33%
Na 589.592†	1421.5	0.1116	mg/L	0.00303	2.789	mg/L	0.0756	2.71%
Na 330.237†	-3.1	-0.1092	mg/L	0.07862	-2.731	mg/L	1.9656	71.98%
Ni 231.604†	68.1	0.01652	mg/L	0.001190	0.4129	mg/L	0.02976	7.21%
Pb 220.353†	2560.8	0.3219	mg/L	0.01264	8.047	mg/L	0.3160	3.93%
Sb 206.836†	3.4	0.00104	mg/L	0.000556	0.02598	mg/L	0.013899	53.49%
Se 196.026†	3.9	0.00258	mg/L	0.001108	0.06456	mg/L	0.027700	42.91%
Si 288.158†	281.0	0.1311	mg/L	0.00594	3.276	mg/L	0.1485	4.53%
Sn 189.927†	-7.7	-0.00127	mg/L	0.000459	-0.03170	mg/L	0.011486	36.23%
Sr 421.552†	51875.7	0.05538	mg/L	0.001177	1.384	mg/L	0.0294	2.12%
Ti 334.903†	9493.8	0.4553	mg/L	0.00925	11.38	mg/L	0.231	2.03%
Tl 190.801†	5.5	0.00370	mg/L	0.000800	0.09261	mg/L	0.019997	21.59%
V 292.402†	2466.2	0.01823	mg/L	0.000779	0.4558	mg/L	0.01946	4.27%
Zn 206.200†	1282.4	0.3164	mg/L	0.00787	7.909	mg/L	0.1967	2.49%

Sequence No.: 8
Sample ID: VR34 A SWC

Autosampler Location: 339
Date Collected: 11/16/2012 1:59:31 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2314300.0	102.5	%	0.92				0.90%
ScR 361.383	299174.6	104.6	%	0.71				0.68%
Ag 328.068†	110.7	0.00065	mg/L	0.000167	0.00327	mg/L	0.000836	25.58%
Al 308.215†	88802.6	49.86	mg/L	1.074	249.3	mg/L	5.37	2.15%
As 188.979†	4.5	0.06366	mg/L	0.001448	0.3183	mg/L	0.00724	2.27%
B 249.677†	86.3	0.01094	mg/L	0.000985	0.05468	mg/L	0.004924	9.00%
Ba 233.527†	3689.5	0.8009	mg/L	0.01287	4.004	mg/L	0.0644	1.61%
Be 313.042†	1248.5	0.00183	mg/L	0.000040	0.00916	mg/L	0.000202	2.20%
Ca 317.933†	352649.6	24.83	mg/L	0.517	124.1	mg/L	2.59	2.08%
Cd 228.802†	1112.9	0.03446	mg/L	0.001205	0.1723	mg/L	0.00603	3.50%
Co 228.616†	1293.6	0.03138	mg/L	0.000852	0.1569	mg/L	0.00426	2.72%
Cr 267.716†	578.6	0.09385	mg/L	0.002332	0.4692	mg/L	0.01166	2.48%
Cu 324.752†	20987.8	0.08346	mg/L	0.002414	0.4173	mg/L	0.01207	2.89%
Fe 273.955†	99522.2	75.91	mg/L	1.483	379.5	mg/L	7.41	1.95%
K 766.490†	15530.5	7.792	mg/L	0.1621	38.96	mg/L	0.811	2.08%
Mg 279.077†	27662.9	18.72	mg/L	0.361	93.59	mg/L	1.805	1.93%
Mn 257.610†	146171.2	4.041	mg/L	0.0760	20.20	mg/L	0.380	1.88%
Mo 202.031†	54.2	0.00243	mg/L	0.000284	0.01214	mg/L	0.001421	11.70%
Na 589.592†	6779.0	0.5321	mg/L	0.00845	2.660	mg/L	0.0422	1.59%
Na 330.237†	4.2	0.1332	mg/L	0.03323	0.6660	mg/L	0.16614	24.94%
Ni 231.604†	318.8	0.07737	mg/L	0.001789	0.3868	mg/L	0.00894	2.31%
Pb 220.353†	12668.8	1.592	mg/L	0.0437	7.961	mg/L	0.2186	2.75%
Sb 206.836†	31.4	0.00957	mg/L	0.001681	0.04786	mg/L	0.008405	17.56%
Se 196.026†	10.9	0.00724	mg/L	0.002799	0.03618	mg/L	0.013995	38.68%
Si 288.158†	1387.4	0.6470	mg/L	0.00376	3.235	mg/L	0.0188	0.58%
Sn 189.927†	-8.5	0.00127	mg/L	0.001245	0.00636	mg/L	0.006227	97.87%
Sr 421.552†	249751.0	0.2666	mg/L	0.00570	1.333	mg/L	0.0285	2.14%
Ti 334.903†	45757.7	2.194	mg/L	0.0445	10.97	mg/L	0.223	2.03%
Tl 190.801†	-12.5	0.00267	mg/L	0.003570	0.01337	mg/L	0.017851	133.52%
V 292.402†	12369.5	0.09158	mg/L	0.002581	0.4579	mg/L	0.01290	2.82%
Zn 206.200†	6290.9	1.552	mg/L	0.0246	7.759	mg/L	0.1228	1.58%

Sequence No.: 9
Sample ID: VR34 ADUP SWC

Autosampler Location: 340
Date Collected: 11/16/2012 2:03:32 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 ADUP SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2328273.0	103.1	%	1.06				1.03%
ScR 361.383	299292.2	104.7	%	1.05				1.00%
Ag 328.068†	108.1	0.00064	mg/L	0.000080	0.00321	mg/L	0.000401	12.49%
Al 308.215†	91719.1	51.50	mg/L	1.216	257.5	mg/L	6.08	2.36%
As 188.979†	8.2	0.07056	mg/L	0.003173	0.3528	mg/L	0.01587	4.50%
B 249.677†	97.2	0.01232	mg/L	0.001161	0.06162	mg/L	0.005804	9.42%
Ba 233.527†	3908.7	0.8489	mg/L	0.01979	4.245	mg/L	0.0990	2.33%
Be 313.042†	1296.8	0.00190	mg/L	0.000057	0.00951	mg/L	0.000284	2.99%
Ca 317.933†	382770.2	26.95	mg/L	0.496	134.7	mg/L	2.48	1.84%
Cd 228.802†	1255.8	0.03895	mg/L	0.000370	0.1947	mg/L	0.00185	0.95%
Co 228.616†	1350.5	0.03263	mg/L	0.000577	0.1631	mg/L	0.00289	1.77%
Cr 267.716†	619.7	0.1004	mg/L	0.00378	0.5021	mg/L	0.01891	3.77%
Cu 324.752†	24044.6	0.09524	mg/L	0.001394	0.4762	mg/L	0.00697	1.46%
Fe 273.955†	101505.6	77.42	mg/L	1.462	387.1	mg/L	7.31	1.89%
K 766.490†	16343.3	8.200	mg/L	0.1846	41.00	mg/L	0.923	2.25%
Mg 279.077†	28737.7	19.45	mg/L	0.386	97.23	mg/L	1.930	1.98%
Mn 257.610†	155887.1	4.309	mg/L	0.0892	21.55	mg/L	0.446	2.07%
Mo 202.031†	59.0	0.00264	mg/L	0.000292	0.01322	mg/L	0.001461	11.05%
Na 589.592†	6794.0	0.5332	mg/L	0.00972	2.666	mg/L	0.0486	1.82%
Na 330.237†	5.1	0.1452	mg/L	0.03203	0.7260	mg/L	0.16017	22.06%
Ni 231.604†	334.4	0.08114	mg/L	0.002222	0.4057	mg/L	0.01111	2.74%
Pb 220.353†	14247.3	1.790	mg/L	0.0223	8.949	mg/L	0.1116	1.25%
Sb 206.836†	40.5	0.01236	mg/L	0.000412	0.06178	mg/L	0.002060	3.33%
Se 196.026†	9.8	0.00649	mg/L	0.002224	0.03243	mg/L	0.011120	34.29%
Si 288.158†	1474.7	0.6877	mg/L	0.01993	3.438	mg/L	0.0997	2.90%
Sn 189.927†	-8.1	0.00165	mg/L	0.001594	0.00826	mg/L	0.007971	96.46%
Sr 421.552†	274886.8	0.2934	mg/L	0.00668	1.467	mg/L	0.0334	2.28%
Ti 334.903†	49439.8	2.371	mg/L	0.0514	11.85	mg/L	0.257	2.17%
Tl 190.801†	-5.3	0.00563	mg/L	0.002162	0.02815	mg/L	0.010810	38.40%
V 292.402†	13265.5	0.09834	mg/L	0.001224	0.4917	mg/L	0.00612	1.25%
Zn 206.200†	7029.2	1.734	mg/L	0.0404	8.670	mg/L	0.2019	2.33%

Sequence No.: 10
Sample ID: VR34 ASPK SWC

Autosampler Location: 341
Date Collected: 11/16/2012 2:07:33 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR34 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR34 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2290384.9	101.5	%	0.37				0.36%
ScR 361.383	296734.1	103.8	%	1.44				1.38%
Ag 328.068†	32996.7	0.1868	mg/L	0.00262	0.9340	mg/L	0.01311	1.40%
Al 308.215†	93533.3	52.51	mg/L	0.211	262.6	mg/L	1.05	0.40%
As 188.979†	1372.5	0.7891	mg/L	0.00765	3.945	mg/L	0.0382	0.97%
B 249.677†	100.0	0.01229	mg/L	0.000815	0.06144	mg/L	0.004077	6.64%
Ba 233.527†	7414.0	1.622	mg/L	0.0065	8.110	mg/L	0.0325	0.40%
Be 313.042†	126141.7	0.1896	mg/L	0.00033	0.9480	mg/L	0.00165	0.17%
Ca 317.933†	425417.8	29.95	mg/L	0.142	149.8	mg/L	0.71	0.48%
Cd 228.802†	7795.9	0.2408	mg/L	0.00280	1.204	mg/L	0.0140	1.16%
Co 228.616†	8163.2	0.2260	mg/L	0.00254	1.130	mg/L	0.0127	1.12%
Cr 267.716†	1883.8	0.3034	mg/L	0.00157	1.517	mg/L	0.0079	0.52%
Cu 324.752†	75506.6	0.2931	mg/L	0.00421	1.465	mg/L	0.0211	1.44%
Fe 273.955†	98694.8	75.27	mg/L	0.279	376.4	mg/L	1.39	0.37%
K 766.490†	24224.1	12.15	mg/L	0.067	60.77	mg/L	0.333	0.55%
Mg 279.077†	34975.6	23.68	mg/L	0.122	118.4	mg/L	0.61	0.52%
Mn 257.610†	157250.6	4.347	mg/L	0.0137	21.74	mg/L	0.068	0.31%
Mo 202.031†	59.3	0.00262	mg/L	0.000192	0.01309	mg/L	0.000958	7.32%
Na 589.592†	54201.4	4.254	mg/L	0.0100	21.27	mg/L	0.050	0.24%
Na 330.237†	128.6	4.371	mg/L	0.0491	21.85	mg/L	0.246	1.12%
Ni 231.604†	1111.1	0.2693	mg/L	0.00161	1.346	mg/L	0.0081	0.60%
Pb 220.353†	19972.9	2.506	mg/L	0.0340	12.53	mg/L	0.170	1.36%
Sb 206.836†	39.1	0.00968	mg/L	0.000339	0.04839	mg/L	0.001696	3.51%
Se 196.026†	1097.9	0.7371	mg/L	0.00804	3.686	mg/L	0.0402	1.09%
Si 288.158†	1363.5	0.6373	mg/L	0.00085	3.186	mg/L	0.0043	0.13%
Sn 189.927†	-16.2	-0.00004	mg/L	0.001009	-0.00020	mg/L	0.005047	>999.9%
Sr 421.552†	444789.2	0.4748	mg/L	0.00124	2.374	mg/L	0.0062	0.26%
Ti 334.903†	46940.6	2.251	mg/L	0.0058	11.25	mg/L	0.029	0.26%
Tl 190.801†	1800.1	0.7098	mg/L	0.00710	3.549	mg/L	0.0355	1.00%
V 292.402†	37360.2	0.2833	mg/L	0.00412	1.417	mg/L	0.0206	1.46%
Zn 206.200†	7574.0	1.868	mg/L	0.0044	9.342	mg/L	0.0222	0.24%

Sequence No.: 11
Sample ID: ~~VR34 APOST SWC~~ 222222
Dilution: 5.000000X 11-10

Autosampler Location: 342
Date Collected: 11/16/2012 2:11:35 PM
Data Type: Original

Nebulizer Parameters: VR34 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR34 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2351668.7	104.2	%	1.12				1.08%
ScR 361.383	301301.7	105.4	%	0.66				0.63%
Ag 328.068†	90584.6	0.5128	mg/L	0.01477	2.564	mg/L	0.0739	2.88%
Al 308.215†	87509.6	49.13	mg/L	0.731	245.6	mg/L	3.66	1.49%
As 188.979†	3830.6	2.085	mg/L	0.0554	10.43	mg/L	0.277	2.65%
B 249.677†	92.9	0.01073	mg/L	0.001663	0.05367	mg/L	0.008317	15.50%
Ba 233.527†	12354.2	2.711	mg/L	0.0192	13.56	mg/L	0.096	0.71%
Be 313.042†	313224.6	0.4708	mg/L	0.00931	2.354	mg/L	0.0466	1.98%
Ca 317.933†	469111.1	33.03	mg/L	0.137	165.1	mg/L	0.68	0.41%
Cd 228.802†	18408.5	0.5673	mg/L	0.01651	2.837	mg/L	0.0826	2.91%
Co 228.616†	19387.5	0.5446	mg/L	0.01510	2.723	mg/L	0.0755	2.77%
Cr 267.716†	3602.1	0.5796	mg/L	0.00520	2.898	mg/L	0.0260	0.90%
Cu 324.752†	159541.0	0.6162	mg/L	0.01469	3.081	mg/L	0.0735	2.38%
Fe 273.955†	96809.2	73.83	mg/L	0.954	369.2	mg/L	4.77	1.29%
K 766.490†	33631.6	16.87	mg/L	0.047	84.37	mg/L	0.233	0.28%
Mg 279.077†	40059.2	27.13	mg/L	0.101	135.6	mg/L	0.51	0.37%
Mn 257.610†	155432.3	4.297	mg/L	0.0467	21.48	mg/L	0.233	1.09%
Mo 202.031†	63.4	0.00277	mg/L	0.000063	0.01385	mg/L	0.000317	2.29%
Na 589.592†	122990.0	9.653	mg/L	0.1164	48.26	mg/L	0.582	1.21%
Na 330.237†	296.0	10.14	mg/L	0.069	50.72	mg/L	0.344	0.68%
Ni 231.604†	2196.5	0.5321	mg/L	0.00391	2.661	mg/L	0.0195	0.73%
Pb 220.353†	27814.8	3.485	mg/L	0.0501	17.43	mg/L	0.250	1.44%
Sb 206.836†	48.1	0.00963	mg/L	0.001524	0.04816	mg/L	0.007622	15.83%
Se 196.026†	3057.3	2.053	mg/L	0.0575	10.26	mg/L	0.287	2.80%
Si 288.158†	1303.7	0.6111	mg/L	0.01168	3.056	mg/L	0.0584	1.91%
Sn 189.927†	-18.4	-0.00021	mg/L	0.000201	-0.00103	mg/L	0.001003	97.83%
Sr 421.552†	667661.5	0.7127	mg/L	0.00388	3.564	mg/L	0.0194	0.54%
Ti 334.903†	43476.0	2.084	mg/L	0.0305	10.42	mg/L	0.152	1.46%
Tl 190.801†	4964.5	1.944	mg/L	0.0569	9.722	mg/L	0.2845	2.93%
V 292.402†	79121.9	0.6035	mg/L	0.01479	3.018	mg/L	0.0740	2.45%
Zn 206.200†	7764.9	1.916	mg/L	0.0232	9.578	mg/L	0.1162	1.21%

Sequence No.: 12
Sample ID: VR34 MB1SPK SWC

Autosampler Location: 343
Date Collected: 11/16/2012 2:15:37 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR34 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR34 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2267576.0	100.5	%	0.52				0.52%
ScR 361.383	289336.8	101.2	%	1.47				1.45%
Ag 328.068†	87075.9	0.4929	mg/L	0.01242	0.9858	mg/L	0.02484	2.52%
Al 308.215†	3619.1	2.025	mg/L	0.0272	4.050	mg/L	0.0544	1.34%
As 188.979†	3544.4	1.876	mg/L	0.0545	3.751	mg/L	0.1091	2.91%
B 249.677†	9.7	0.00023	mg/L	0.000794	0.00046	mg/L	0.001589	344.06%
Ba 233.527†	9278.7	2.045	mg/L	0.0226	4.090	mg/L	0.0453	1.11%
Be 313.042†	329497.0	0.4954	mg/L	0.00461	0.9907	mg/L	0.00922	0.93%
Ca 317.933†	141179.6	9.939	mg/L	0.1091	19.88	mg/L	0.218	1.10%
Cd 228.802†	16511.7	0.5091	mg/L	0.01473	1.018	mg/L	0.0295	2.89%
Co 228.616†	17324.0	0.4911	mg/L	0.01328	0.9821	mg/L	0.02655	2.70%
Cr 267.716†	3208.6	0.5155	mg/L	0.00672	1.031	mg/L	0.0134	1.30%
Cu 324.752†	123950.8	0.4767	mg/L	0.01514	0.9535	mg/L	0.03028	3.18%
Fe 273.955†	2727.6	2.077	mg/L	0.0333	4.154	mg/L	0.0665	1.60%
K 766.490†	19835.7	9.952	mg/L	0.1670	19.90	mg/L	0.334	1.68%
Mg 279.077†	15100.3	10.24	mg/L	0.117	20.48	mg/L	0.235	1.15%
Mn 257.610†	18637.2	0.5155	mg/L	0.00669	1.031	mg/L	0.0134	1.30%
Mo 202.031†	15.9	0.00066	mg/L	0.000084	0.00132	mg/L	0.000168	12.78%
Na 589.592†	123189.7	9.669	mg/L	0.1194	19.34	mg/L	0.239	1.23%
Na 330.237†	287.1	9.831	mg/L	0.2926	19.66	mg/L	0.585	2.98%
Ni 231.604†	1998.7	0.4842	mg/L	0.00527	0.9684	mg/L	0.01055	1.09%
Pb 220.353†	15033.6	1.880	mg/L	0.0481	3.759	mg/L	0.0962	2.56%
Sb 206.836†	18.8	0.00021	mg/L	0.001722	0.00042	mg/L	0.003445	815.71%
Se 196.026†	2825.6	1.897	mg/L	0.0604	3.795	mg/L	0.1208	3.18%
Si 288.158†	-8.1	-0.00065	mg/L	0.001867	-0.00130	mg/L	0.003733	287.48%
Sn 189.927†	-23.9	-0.00485	mg/L	0.000639	-0.00969	mg/L	0.001278	13.19%
Sr 421.552†	457551.1	0.4884	mg/L	0.00575	0.9769	mg/L	0.01150	1.18%
Ti 334.903†	57.0	0.00216	mg/L	0.000258	0.00432	mg/L	0.000515	11.94%
Tl 190.801†	4688.3	1.829	mg/L	0.0526	3.659	mg/L	0.1051	2.87%
V 292.402†	63899.3	0.4901	mg/L	0.01248	0.9803	mg/L	0.02495	2.55%
Zn 206.200†	1977.5	0.4879	mg/L	0.00532	0.9757	mg/L	0.01064	1.09%

Sequence No.: 13
Sample ID: CV9
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 11/16/2012 2:19:38 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2303611.5	102.1	%	1.41				1.38%
ScR 361.383	286578.5	100.2	%	0.78				0.78%
Ag 328.068†	168518.2	0.9539	mg/L	0.02429	0.9539	mg/L	0.02429	2.55%
Al 308.215†	3600.3	1.987	mg/L	0.0311	1.987	mg/L	0.0311	1.56%
As 188.979†	3634.5	1.950	mg/L	0.0265	1.950	mg/L	0.0265	1.36%
B 249.677†	7509.3	0.9575	mg/L	0.01257	0.9575	mg/L	0.01257	1.31%
Ba 233.527†	4630.9	1.020	mg/L	0.0095	1.020	mg/L	0.0095	0.93%
Be 313.042†	642288.1	0.9656	mg/L	0.00731	0.9656	mg/L	0.00731	0.76%
Ca 317.933†	29093.1	2.048	mg/L	0.0222	2.048	mg/L	0.0222	1.08%
Cd 228.802†	32544.7	1.015	mg/L	0.0224	1.015	mg/L	0.0224	2.20%
Co 228.616†	35274.3	0.9983	mg/L	0.02238	0.9983	mg/L	0.02238	2.24%
Cr 267.716†	6359.7	1.023	mg/L	0.0100	1.023	mg/L	0.0100	0.98%
Cu 324.752†	256392.8	0.9856	mg/L	0.02327	0.9856	mg/L	0.02327	2.36%
Fe 273.955†	2711.3	2.061	mg/L	0.0286	2.061	mg/L	0.0286	1.39%
K 766.490†	40019.4	20.08	mg/L	0.097	20.08	mg/L	0.097	0.48%
Mg 279.077†	2977.9	2.027	mg/L	0.0190	2.027	mg/L	0.0190	0.94%
Mn 257.610†	37488.2	1.037	mg/L	0.0122	1.037	mg/L	0.0122	1.17%
Mo 202.031†	20325.9	1.013	mg/L	0.0124	1.013	mg/L	0.0124	1.22%
Na 589.592†	627947.3	49.29	mg/L	0.327	49.29	mg/L	0.327	0.66%
Na 330.237†	1479.6	51.40	mg/L	0.244	51.40	mg/L	0.244	0.48%
Ni 231.604†	3989.9	0.9684	mg/L	0.00779	0.9684	mg/L	0.00779	0.80%
Pb 220.353†	15840.5	1.981	mg/L	0.0238	1.981	mg/L	0.0238	1.20%
Sb 206.836†	6827.4	2.087	mg/L	0.0295	2.087	mg/L	0.0295	1.41%
Se 196.026†	2855.0	1.917	mg/L	0.0250	1.917	mg/L	0.0250	1.30%
Si 288.158†	4453.6	2.069	mg/L	0.0323	2.069	mg/L	0.0323	1.56%
Sn 189.927†	3907.7	1.004	mg/L	0.0140	1.004	mg/L	0.0140	1.39%
Sr 421.552†	903823.6	0.9649	mg/L	0.00632	0.9649	mg/L	0.00632	0.66%
Ti 334.903†	22054.1	1.057	mg/L	0.0113	1.057	mg/L	0.0113	1.07%
Tl 190.801†	4917.4	1.915	mg/L	0.0253	1.915	mg/L	0.0253	1.32%
V 292.402†	128984.3	0.9894	mg/L	0.02351	0.9894	mg/L	0.02351	2.38%
Zn 206.200†	4067.0	1.003	mg/L	0.0101	1.003	mg/L	0.0101	1.01%

Sequence No.: 14
Sample ID: CB 9
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 2:23:45 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2311198.6	102.4	%	0.12				0.12%
ScR 361.383	290895.3	101.7	%	0.80				0.79%
Ag 328.068†	35.9	0.00020	mg/L	0.000128	0.00020	mg/L	0.000128	63.16%
Al 308.215†	19.6	0.01102	mg/L	0.005135	0.01102	mg/L	0.005135	46.59%
As 188.979†	-2.0	-0.00106	mg/L	0.001698	-0.00106	mg/L	0.001698	160.83%
B 249.677†	9.7	0.00124	mg/L	0.000912	0.00124	mg/L	0.000912	73.47%
Ba 233.527†	1.2	0.00026	mg/L	0.000738	0.00026	mg/L	0.000738	279.83%
Be 313.042†	174.5	0.00026	mg/L	0.000048	0.00026	mg/L	0.000048	18.43%
Ca 317.933†	38.0	0.00268	mg/L	0.000640	0.00268	mg/L	0.000640	23.94%
Cd 228.802†	-7.9	-0.00024	mg/L	0.000108	-0.00024	mg/L	0.000108	44.71%
Co 228.616†	-4.0	-0.00011	mg/L	0.000092	-0.00011	mg/L	0.000092	80.39%
Cr 267.716†	-3.0	-0.00049	mg/L	0.000718	-0.00049	mg/L	0.000718	147.19%
Cu 324.752†	-53.2	-0.00020	mg/L	0.000194	-0.00020	mg/L	0.000194	94.93%
Fe 273.955†	10.5	0.00801	mg/L	0.001908	0.00801	mg/L	0.001908	23.83%
K 766.490†	-12.2	-0.00611	mg/L	0.020361	-0.00611	mg/L	0.020361	333.37%
Mg 279.077†	2.5	0.00168	mg/L	0.003745	0.00168	mg/L	0.003745	222.53%
Mn 257.610†	4.3	0.00012	mg/L	0.000108	0.00012	mg/L	0.000108	90.44%
Mo 202.031†	13.2	0.00066	mg/L	0.000250	0.00066	mg/L	0.000250	38.20%
Na 589.592†	124.7	0.00978	mg/L	0.004186	0.00978	mg/L	0.004186	42.79%
Na 330.237†	-0.4	-0.01519	mg/L	0.330429	-0.01519	mg/L	0.330429	>999.9%
Ni 231.604†	-1.1	-0.00028	mg/L	0.000775	-0.00028	mg/L	0.000775	279.60%
Pb 220.353†	-1.3	-0.00016	mg/L	0.000548	-0.00016	mg/L	0.000548	351.13%
Sb 206.836†	8.5	0.00261	mg/L	0.001787	0.00261	mg/L	0.001787	68.50%
Se 196.026†	1.5	0.00101	mg/L	0.002227	0.00101	mg/L	0.002227	220.16%
Si 288.158†	6.7	0.00311	mg/L	0.000885	0.00311	mg/L	0.000885	28.47%
Sn 189.927†	-3.2	-0.00082	mg/L	0.000249	-0.00082	mg/L	0.000249	30.40%
Sr 421.552†	252.5	0.00027	mg/L	0.000039	0.00027	mg/L	0.000039	14.60%
Ti 334.903†	16.7	0.00080	mg/L	0.000550	0.00080	mg/L	0.000550	68.72%
Tl 190.801†	3.3	0.00131	mg/L	0.000650	0.00131	mg/L	0.000650	49.71%
V 292.402†	-29.3	-0.00023	mg/L	0.000030	-0.00023	mg/L	0.000030	13.27%
Zn 206.200†	-1.2	-0.00029	mg/L	0.000488	-0.00029	mg/L	0.000488	165.87%

Sequence No.: 15
Sample ID: VR33 MB1 SWC

Autosampler Location: 344
Date Collected: 11/16/2012 2:28:01 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR33 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2303307.5	102.0	%	1.71				1.68%
ScR 361.383	300037.2	104.9	%	0.62				0.59%
Ag 328.068†	25.8	0.00015	mg/L	0.000211	0.00029	mg/L	0.000423	144.94%
Al 308.215†	18.5	0.01040	mg/L	0.008747	0.02080	mg/L	0.017494	84.10%
As 188.979†	-2.4	-0.00124	mg/L	0.000890	-0.00248	mg/L	0.001780	71.92%
B 249.677†	5.4	0.00070	mg/L	0.000542	0.00139	mg/L	0.001084	77.87%
Ba 233.527†	-2.9	-0.00065	mg/L	0.000719	-0.00129	mg/L	0.001438	111.16%
Be 313.042†	26.6	0.00004	mg/L	0.000009	0.00008	mg/L	0.000019	23.24%
Ca 317.933†	80.7	0.00568	mg/L	0.000726	0.01137	mg/L	0.001451	12.76%
Cd 228.802†	-16.6	-0.00051	mg/L	0.000120	-0.00103	mg/L	0.000239	23.28%
Co 228.616†	-14.4	-0.00041	mg/L	0.000185	-0.00082	mg/L	0.000371	44.99%
Cr 267.716†	-9.7	-0.00156	mg/L	0.000722	-0.00312	mg/L	0.001443	46.25%
Cu 324.752†	-81.5	-0.00031	mg/L	0.000108	-0.00063	mg/L	0.000216	34.44%
Fe 273.955†	10.5	0.00802	mg/L	0.000313	0.01605	mg/L	0.000626	3.90%
K 766.490†	-33.3	-0.01670	mg/L	0.021499	-0.03340	mg/L	0.042997	128.72%
Mg 279.077†	0.3	0.00020	mg/L	0.000867	0.00040	mg/L	0.001733	437.49%
Mn 257.610†	-5.7	-0.00016	mg/L	0.000058	-0.00031	mg/L	0.000116	36.88%
Mo 202.031†	-0.6	-0.00003	mg/L	0.000078	-0.00006	mg/L	0.000156	250.42%
Na 589.592†	22.2	0.00174	mg/L	0.003715	0.00348	mg/L	0.007429	213.42%
Na 330.237†	2.6	0.08880	mg/L	0.033144	0.1776	mg/L	0.06629	37.33%
Ni 231.604†	0.9	0.00022	mg/L	0.000944	0.00044	mg/L	0.001888	433.79%
Pb 220.353†	-0.8	-0.00010	mg/L	0.000634	-0.00020	mg/L	0.001267	648.83%
Sb 206.836†	-2.8	-0.00083	mg/L	0.000631	-0.00165	mg/L	0.001262	76.38%
Se 196.026†	3.8	0.00253	mg/L	0.003651	0.00507	mg/L	0.007301	144.11%
Si 288.158†	-1.4	-0.00067	mg/L	0.002745	-0.00133	mg/L	0.005489	411.18%
Sn 189.927†	-2.7	-0.00070	mg/L	0.000635	-0.00141	mg/L	0.001271	90.29%
Sr 421.552†	43.6	0.00005	mg/L	0.000030	0.00009	mg/L	0.000060	64.64%
Ti 334.903†	26.7	0.00128	mg/L	0.000205	0.00256	mg/L	0.000411	16.04%
Tl 190.801†	2.2	0.00087	mg/L	0.001734	0.00174	mg/L	0.003468	199.80%
V 292.402†	-24.8	-0.00020	mg/L	0.000184	-0.00039	mg/L	0.000367	93.23%
Zn 206.200†	2.9	0.00072	mg/L	0.000264	0.00144	mg/L	0.000529	36.72%

Sequence No.: 16
Sample ID: VR33 B SWC

Autosampler Location: 345
Date Collected: 11/16/2012 2:32:18 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2219830.9	98.34	%	0.126				0.13%
ScR 361.383	286637.4	100.2	%	1.57				1.56%
Ag 328.068†	-92.2	-0.00049	mg/L	0.000097	-0.00245	mg/L	0.000487	19.86%
Al 308.215†	105103.1	59.01	mg/L	1.307	295.1	mg/L	6.54	2.22%
As 188.979†	-62.7	0.03511	mg/L	0.003115	0.1755	mg/L	0.01557	8.87%
B 249.677†	80.1	0.01016	mg/L	0.000293	0.05079	mg/L	0.001466	2.89%
Ba 233.527†	5809.2	1.270	mg/L	0.0247	6.348	mg/L	0.1233	1.94%
Be 313.042†	1350.3	0.00198	mg/L	0.000057	0.00990	mg/L	0.000287	2.90%
Ca 317.933†	286177.4	20.15	mg/L	0.473	100.7	mg/L	2.36	2.35%
Cd 228.802†	543.4	0.01678	mg/L	0.000181	0.08388	mg/L	0.000907	1.08%
Co 228.616†	1056.1	0.02427	mg/L	0.000283	0.1214	mg/L	0.00142	1.17%
Cr 267.716†	493.1	0.08011	mg/L	0.001290	0.4006	mg/L	0.00645	1.61%
Cu 324.752†	14918.8	0.05971	mg/L	0.000490	0.2986	mg/L	0.00245	0.82%
Fe 273.955†	88142.6	67.23	mg/L	1.698	336.1	mg/L	8.49	2.53%
K 766.490†	11716.1	5.878	mg/L	0.1287	29.39	mg/L	0.643	2.19%
Mg 279.077†	22890.8	15.49	mg/L	0.357	77.44	mg/L	1.786	2.31%
Mn 257.610†	132123.8	3.652	mg/L	0.0893	18.26	mg/L	0.447	2.45%
Mo 202.031†	52.9	0.00242	mg/L	0.000475	0.01208	mg/L	0.002375	19.66%
Na 589.592†	9514.1	0.7467	mg/L	0.01571	3.734	mg/L	0.0786	2.10%
Na 330.237†	-4.1	0.09450	mg/L	0.366734	0.4725	mg/L	1.83367	388.09%
Ni 231.604†	224.0	0.05436	mg/L	0.000419	0.2718	mg/L	0.00209	0.77%
Pb 220.353†	6357.5	0.8060	mg/L	0.00286	4.030	mg/L	0.0143	0.35%
Sb 206.836†	15.9	0.00514	mg/L	0.002021	0.02568	mg/L	0.010104	39.35%
Se 196.026†	8.2	0.00544	mg/L	0.005339	0.02722	mg/L	0.026697	98.06%
Si 288.158†	3703.8	1.723	mg/L	0.0212	8.614	mg/L	0.1060	1.23%
Sn 189.927†	-28.3	-0.00439	mg/L	0.000970	-0.02195	mg/L	0.004850	22.09%
Sr 421.552†	250087.6	0.2670	mg/L	0.00580	1.335	mg/L	0.0290	2.17%
Ti 334.903†	50670.2	2.430	mg/L	0.0576	12.15	mg/L	0.288	2.37%
Tl 190.801†	-7.8	0.00356	mg/L	0.001600	0.01778	mg/L	0.008000	45.00%
V 292.402†	14351.5	0.1068	mg/L	0.00057	0.5338	mg/L	0.00283	0.53%
Zn 206.200†	3880.5	0.9573	mg/L	0.01841	4.786	mg/L	0.0920	1.92%

Sequence No.: 17
Sample ID: VR33 C SWC

Autosampler Location: 346
Date Collected: 11/16/2012 2:36:19 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2181297.6	96.64	%	1.797				1.86%
ScR 361.383	283698.7	99.22	%	2.024				2.04%
Ag 328.068†	-161.7	-0.00086	mg/L	0.000023	-0.00429	mg/L	0.000117	2.72%
Al 308.215†	155053.6	87.05	mg/L	1.240	435.3	mg/L	6.20	1.42%
As 188.979†	-112.4	0.07619	mg/L	0.001217	0.3810	mg/L	0.00609	1.60%
B 249.677†	140.0	0.01766	mg/L	0.000908	0.08832	mg/L	0.004542	5.14%
Ba 233.527†	14908.5	3.261	mg/L	0.0705	16.31	mg/L	0.353	2.16%
Be 313.042†	2223.3	0.00325	mg/L	0.000092	0.01623	mg/L	0.000458	2.82%
Ca 317.933†	850767.8	59.90	mg/L	0.929	299.5	mg/L	4.64	1.55%
Cd 228.802†	990.8	0.03048	mg/L	0.001102	0.1524	mg/L	0.00551	3.61%
Co 228.616†	3667.5	0.09227	mg/L	0.002238	0.4614	mg/L	0.01119	2.43%
Cr 267.716†	2576.9	0.4149	mg/L	0.00842	2.075	mg/L	0.0421	2.03%
Cu 324.752†	46787.0	0.1853	mg/L	0.00396	0.9264	mg/L	0.01981	2.14%
Fe 273.955†	202219.2	154.2	mg/L	2.10	771.2	mg/L	10.51	1.36%
K 766.490†	37180.1	18.65	mg/L	0.207	93.27	mg/L	1.037	1.11%
Mg 279.077†	80272.5	54.35	mg/L	0.810	271.8	mg/L	4.05	1.49%
Mn 257.610†	263319.7	7.279	mg/L	0.1013	36.39	mg/L	0.506	1.39%
Mo 202.031†	116.6	0.00514	mg/L	0.000312	0.02571	mg/L	0.001560	6.07%
Na 589.592†	5965.3	0.4682	mg/L	0.00837	2.341	mg/L	0.0419	1.79%
Na 330.237†	-26.4	-0.3796	mg/L	0.15098	-1.898	mg/L	0.7549	39.77%
Ni 231.604†	1270.9	0.3084	mg/L	0.00484	1.542	mg/L	0.0242	1.57%
Pb 220.353†	10893.8	1.376	mg/L	0.0283	6.882	mg/L	0.1414	2.06%
Sb 206.836†	35.7	0.00776	mg/L	0.001053	0.03879	mg/L	0.005267	13.58%
Se 196.026†	9.7	0.00635	mg/L	0.002210	0.03176	mg/L	0.011049	34.79%
Si 288.158†	2309.5	1.080	mg/L	0.0222	5.398	mg/L	0.1108	2.05%
Sn 189.927†	-21.2	0.00272	mg/L	0.001641	0.01358	mg/L	0.008205	60.40%
Sr 421.552†	466051.7	0.4975	mg/L	0.00641	2.488	mg/L	0.0320	1.29%
Ti 334.903†	101749.7	4.879	mg/L	0.0730	24.40	mg/L	0.365	1.50%
Tl 190.801†	-33.1	0.00215	mg/L	0.001727	0.01077	mg/L	0.008637	80.22%
V 292.402†	25525.8	0.1897	mg/L	0.00409	0.9483	mg/L	0.02046	2.16%
Zn 206.200†	7042.6	1.737	mg/L	0.0359	8.686	mg/L	0.1796	2.07%

Sequence No.: 18
Sample ID: VR33 D SWC

Autosampler Location: 347
Date Collected: 11/16/2012 2:40:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2191568.1	97.09	%	1.772				1.83%
ScR 361.383	279449.2	97.73	%	1.708				1.75%
Ag 328.068†	-84.8	-0.00044	mg/L	0.000218	-0.00219	mg/L	0.001092	49.77%
Al 308.215†	122049.4	68.53	mg/L	1.449	342.6	mg/L	7.25	2.11%
As 188.979†	-31.1	0.06484	mg/L	0.002648	0.3242	mg/L	0.01324	4.08%
B 249.677†	79.1	0.00999	mg/L	0.000330	0.04995	mg/L	0.001648	3.30%
Ba 233.527†	5498.0	1.197	mg/L	0.0265	5.983	mg/L	0.1323	2.21%
Be 313.042†	1493.3	0.00218	mg/L	0.000080	0.01091	mg/L	0.000399	3.66%
Ca 317.933†	331318.6	23.33	mg/L	0.433	116.6	mg/L	2.17	1.86%
Cd 228.802†	844.1	0.02593	mg/L	0.000562	0.1296	mg/L	0.00281	2.17%
Co 228.616†	1860.3	0.04584	mg/L	0.000989	0.2292	mg/L	0.00495	2.16%
Cr 267.716†	747.3	0.1215	mg/L	0.00267	0.6077	mg/L	0.01337	2.20%
Cu 324.752†	27057.1	0.1074	mg/L	0.00163	0.5372	mg/L	0.00814	1.52%
Fe 273.955†	123089.0	93.88	mg/L	1.801	469.4	mg/L	9.00	1.92%
K 766.490†	22932.9	11.51	mg/L	0.207	57.53	mg/L	1.036	1.80%
Mg 279.077†	31216.4	21.12	mg/L	0.418	105.6	mg/L	2.09	1.98%
Mn 257.610†	129888.2	3.590	mg/L	0.0688	17.95	mg/L	0.344	1.91%
Mo 202.031†	73.6	0.00341	mg/L	0.000275	0.01704	mg/L	0.001377	8.08%
Na 589.592†	7004.8	0.5498	mg/L	0.00892	2.749	mg/L	0.0446	1.62%
Na 330.237†	-21.0	-0.4676	mg/L	0.14319	-2.338	mg/L	0.7160	30.62%
Ni 231.604†	355.6	0.08629	mg/L	0.001285	0.4315	mg/L	0.00642	1.49%
Pb 220.353†	7076.7	0.8970	mg/L	0.01690	4.485	mg/L	0.0845	1.88%
Sb 206.836†	27.0	0.00827	mg/L	0.001708	0.04136	mg/L	0.008539	20.65%
Se 196.026†	5.3	0.00345	mg/L	0.002707	0.01725	mg/L	0.013533	78.43%
Si 288.158†	3254.8	1.515	mg/L	0.0370	7.574	mg/L	0.1851	2.44%
Sn 189.927†	-30.9	-0.00458	mg/L	0.001453	-0.02292	mg/L	0.007263	31.69%
Sr 421.552†	192031.9	0.2050	mg/L	0.00396	1.025	mg/L	0.0198	1.93%
Ti 334.903†	60285.5	2.891	mg/L	0.0571	14.46	mg/L	0.285	1.97%
Tl 190.801†	-13.7	0.00387	mg/L	0.001335	0.01937	mg/L	0.006676	34.46%
V 292.402†	18696.7	0.1389	mg/L	0.00206	0.6946	mg/L	0.01031	1.48%
Zn 206.200†	4842.1	1.194	mg/L	0.0284	5.972	mg/L	0.1421	2.38%

Sequence No.: 19
Sample ID: VR33 A-L SWC

Autosampler Location: 348
Date Collected: 11/16/2012 2:44:08 PM
Data Type: Original

Dilution: 25.000000X

Nebulizer Parameters: VR33 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2193796.2	97.19	%	0.834				0.86%
ScR 361.383	277795.2	97.16	%	1.767				1.82%
Ag 328.068†	26.5	0.00016	mg/L	0.000231	0.00390	mg/L	0.005781	148.38%
Al 308.215†	21514.8	12.08	mg/L	0.223	302.0	mg/L	5.58	1.85%
As 188.979†	-0.7	0.01322	mg/L	0.000993	0.3304	mg/L	0.02482	7.51%
B 249.677†	26.5	0.00337	mg/L	0.000864	0.08417	mg/L	0.021601	25.66%
Ba 233.527†	1135.7	0.2479	mg/L	0.00490	6.197	mg/L	0.1226	1.98%
Be 313.042†	345.4	0.00051	mg/L	0.000007	0.01274	mg/L	0.000163	1.28%
Ca 317.933†	93204.8	6.562	mg/L	0.1180	164.0	mg/L	2.95	1.80%
Cd 228.802†	224.0	0.00694	mg/L	0.000228	0.1736	mg/L	0.00570	3.28%
Co 228.616†	251.0	0.00596	mg/L	0.000289	0.1490	mg/L	0.00722	4.85%
Cr 267.716†	95.0	0.01538	mg/L	0.000584	0.3845	mg/L	0.01459	3.79%
Cu 324.752†	6296.5	0.02474	mg/L	0.000456	0.6185	mg/L	0.01140	1.84%
Fe 273.955†	19586.8	14.94	mg/L	0.322	373.5	mg/L	8.05	2.16%
K 766.490†	2963.1	1.487	mg/L	0.0066	37.17	mg/L	0.166	0.45%
Mg 279.077†	5876.9	3.977	mg/L	0.0681	99.43	mg/L	1.703	1.71%
Mn 257.610†	32754.0	0.9054	mg/L	0.01885	22.64	mg/L	0.471	2.08%
Mo 202.031†	12.3	0.00054	mg/L	0.000218	0.01358	mg/L	0.005444	40.08%
Na 589.592†	1728.9	0.1357	mg/L	0.00536	3.392	mg/L	0.1339	3.95%
Na 330.237†	-22.2	-0.7719	mg/L	0.10653	-19.30	mg/L	2.663	13.80%
Ni 231.604†	66.3	0.01608	mg/L	0.001396	0.4020	mg/L	0.03491	8.68%
Pb 220.353†	2999.5	0.3771	mg/L	0.00558	9.428	mg/L	0.1394	1.48%
Sb 206.836†	8.0	0.00250	mg/L	0.000705	0.06242	mg/L	0.017634	28.25%
Se 196.026†	0.9	0.00059	mg/L	0.002488	0.01479	mg/L	0.062200	420.42%
Si 288.158†	840.3	0.3909	mg/L	0.00667	9.774	mg/L	0.1666	1.70%
Sn 189.927†	-11.9	-0.00216	mg/L	0.000430	-0.05408	mg/L	0.010746	19.87%
Sr 421.552†	87736.5	0.09366	mg/L	0.001709	2.342	mg/L	0.0427	1.82%
Ti 334.903†	10172.9	0.4878	mg/L	0.00996	12.20	mg/L	0.249	2.04%
Tl 190.801†	-2.5	0.00052	mg/L	0.000990	0.01292	mg/L	0.024749	191.61%
V 292.402†	2643.6	0.01959	mg/L	0.000171	0.4898	mg/L	0.00427	0.87%
Zn 206.200†	1365.8	0.3369	mg/L	0.00632	8.423	mg/L	0.1579	1.87%

Sequence No.: 20
Sample ID: VR33 A SWC

Autosampler Location: 349
Date Collected: 11/16/2012 2:48:08 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2197010.1	97.33	%	0.829				0.85%
ScR 361.383	282869.4	98.93	%	0.700				0.71%
Ag 328.068†	85.5	0.00051	mg/L	0.000082	0.00256	mg/L	0.000411	16.03%
Al 308.215†	104658.3	58.76	mg/L	0.341	293.8	mg/L	1.71	0.58%
As 188.979†	1.2	0.06589	mg/L	0.000304	0.3294	mg/L	0.00152	0.46%
B 249.677†	116.0	0.01474	mg/L	0.001416	0.07368	mg/L	0.007080	9.61%
Ba 233.527†	5504.4	1.202	mg/L	0.0109	6.008	mg/L	0.0543	0.90%
Be 313.042†	1288.3	0.00189	mg/L	0.000030	0.00944	mg/L	0.000150	1.59%
Ca 317.933†	451121.9	31.76	mg/L	0.228	158.8	mg/L	1.14	0.72%
Cd 228.802†	1140.2	0.03538	mg/L	0.000526	0.1769	mg/L	0.00263	1.49%
Co 228.616†	1253.5	0.02997	mg/L	0.000432	0.1499	mg/L	0.00216	1.44%
Cr 267.716†	529.3	0.08568	mg/L	0.000969	0.4284	mg/L	0.00484	1.13%
Cu 324.752†	31458.7	0.1235	mg/L	0.00127	0.6175	mg/L	0.00633	1.03%
Fe 273.955†	93927.4	71.64	mg/L	0.504	358.2	mg/L	2.52	0.70%
K 766.490†	14416.4	7.233	mg/L	0.0401	36.16	mg/L	0.201	0.55%
Mg 279.077†	26949.7	18.24	mg/L	0.126	91.19	mg/L	0.631	0.69%
Mn 257.610†	157696.9	4.359	mg/L	0.0313	21.80	mg/L	0.157	0.72%
Mo 202.031†	66.1	0.00295	mg/L	0.000080	0.01473	mg/L	0.000400	2.72%
Na 589.592†	8522.9	0.6689	mg/L	0.00795	3.345	mg/L	0.0398	1.19%
Na 330.237†	-9.6	-0.3406	mg/L	0.15544	-1.703	mg/L	0.7772	45.64%
Ni 231.604†	342.9	0.08320	mg/L	0.002262	0.4160	mg/L	0.01131	2.72%
Pb 220.353†	14355.2	1.805	mg/L	0.0129	9.026	mg/L	0.0645	0.71%
Sb 206.836†	31.1	0.00966	mg/L	0.001820	0.04832	mg/L	0.009102	18.84%
Se 196.026†	3.1	0.00198	mg/L	0.002668	0.00991	mg/L	0.013339	134.56%
Si 288.158†	3973.7	1.849	mg/L	0.0152	9.243	mg/L	0.0759	0.82%
Sn 189.927†	-18.3	-0.00037	mg/L	0.000723	-0.00186	mg/L	0.003617	194.70%
Sr 421.552†	424255.2	0.4529	mg/L	0.00286	2.265	mg/L	0.0143	0.63%
Ti 334.903†	48922.9	2.346	mg/L	0.0144	11.73	mg/L	0.072	0.61%
Tl 190.801†	-9.5	0.00336	mg/L	0.000219	0.01681	mg/L	0.001096	6.52%
V 292.402†	13101.0	0.09724	mg/L	0.000991	0.4862	mg/L	0.00496	1.02%
Zn 206.200†	6642.3	1.639	mg/L	0.0155	8.193	mg/L	0.0776	0.95%

Sequence No.: 21
Sample ID: VR33 ADUP SWC

Autosampler Location: 350
Date Collected: 11/16/2012 2:52:09 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2185960.0	96.84	%	1.328				1.37%
ScR 361.383	275819.5	96.46	%	2.010				2.08%
Ag 328.068†	14.1	0.00011	mg/L	0.000277	0.00054	mg/L	0.001387	255.07%
Al 308.215†	105731.2	59.36	mg/L	1.535	296.8	mg/L	7.67	2.59%
As 188.979†	-4.3	0.06320	mg/L	0.002367	0.3160	mg/L	0.01183	3.75%
B 249.677†	107.4	0.01364	mg/L	0.001102	0.06820	mg/L	0.005512	8.08%
Ba 233.527†	5397.3	1.178	mg/L	0.0244	5.890	mg/L	0.1219	2.07%
Be 313.042†	1289.0	0.00189	mg/L	0.000057	0.00945	mg/L	0.000284	3.00%
Ca 317.933†	448164.8	31.55	mg/L	0.806	157.8	mg/L	4.03	2.56%
Cd 228.802†	1082.5	0.03356	mg/L	0.000875	0.1678	mg/L	0.00437	2.61%
Co 228.616†	1205.7	0.02860	mg/L	0.001079	0.1430	mg/L	0.00540	3.77%
Cr 267.716†	512.2	0.08293	mg/L	0.001163	0.4146	mg/L	0.00582	1.40%
Cu 324.752†	30149.6	0.1185	mg/L	0.00244	0.5924	mg/L	0.01221	2.06%
Fe 273.955†	94574.0	72.13	mg/L	1.962	360.7	mg/L	9.81	2.72%
K 766.490†	13944.7	6.996	mg/L	0.2026	34.98	mg/L	1.013	2.90%
Mg 279.077†	27538.0	18.64	mg/L	0.491	93.18	mg/L	2.453	2.63%
Mn 257.610†	155747.2	4.305	mg/L	0.1145	21.53	mg/L	0.572	2.66%
Mo 202.031†	74.0	0.00334	mg/L	0.000157	0.01671	mg/L	0.000787	4.71%
Na 589.592†	8480.0	0.6656	mg/L	0.01996	3.328	mg/L	0.0998	3.00%
Na 330.237†	-7.5	-0.2539	mg/L	0.18269	-1.270	mg/L	0.9134	71.95%
Ni 231.604†	302.7	0.07346	mg/L	0.001435	0.3673	mg/L	0.00718	1.95%
Pb 220.353†	13523.3	1.701	mg/L	0.0349	8.507	mg/L	0.1745	2.05%
Sb 206.836†	28.3	0.00883	mg/L	0.002305	0.04416	mg/L	0.011524	26.09%
Se 196.026†	3.3	0.00217	mg/L	0.001722	0.01085	mg/L	0.008609	79.33%
Si 288.158†	2595.8	1.208	mg/L	0.0199	6.042	mg/L	0.0996	1.65%
Sn 189.927†	-19.9	-0.00081	mg/L	0.000521	-0.00403	mg/L	0.002606	64.60%
Sr 421.552†	414542.4	0.4425	mg/L	0.01142	2.213	mg/L	0.0571	2.58%
Ti 334.903†	49069.0	2.353	mg/L	0.0609	11.76	mg/L	0.305	2.59%
Tl 190.801†	-5.8	0.00489	mg/L	0.002419	0.02443	mg/L	0.012096	49.51%
V 292.402†	13204.4	0.09799	mg/L	0.001836	0.4900	mg/L	0.00918	1.87%
Zn 206.200†	6512.1	1.606	mg/L	0.0284	8.032	mg/L	0.1421	1.77%

Sequence No.: 22
Sample ID: VR33 ASPK SWC

Autosampler Location: 351
Date Collected: 11/16/2012 2:56:10 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2142405.4	94.91	%	1.753				1.85%
ScR 361.383	280968.0	98.26	%	0.452				0.46%
Ag 328.068†	36884.2	0.2088	mg/L	0.00372	1.044	mg/L	0.0186	1.78%
Al 308.215†	108079.9	60.68	mg/L	0.743	303.4	mg/L	3.71	1.22%
As 188.979†	1550.2	0.8844	mg/L	0.02144	4.422	mg/L	0.1072	2.42%
B 249.677†	118.8	0.01465	mg/L	0.000571	0.07324	mg/L	0.002856	3.90%
Ba 233.527†	9251.5	2.028	mg/L	0.0112	10.14	mg/L	0.056	0.55%
Be 313.042†	135482.4	0.2036	mg/L	0.00311	1.018	mg/L	0.0156	1.53%
Ca 317.933†	515656.7	36.30	mg/L	0.530	181.5	mg/L	2.65	1.46%
Cd 228.802†	8436.5	0.2604	mg/L	0.00689	1.302	mg/L	0.0344	2.64%
Co 228.616†	8954.3	0.2484	mg/L	0.00675	1.242	mg/L	0.0338	2.72%
Cr 267.716†	1867.2	0.3004	mg/L	0.00123	1.502	mg/L	0.0061	0.41%
Cu 324.752†	88984.5	0.3447	mg/L	0.00599	1.724	mg/L	0.0300	1.74%
Fe 273.955†	94471.8	72.05	mg/L	1.051	360.3	mg/L	5.25	1.46%
K 766.490†	22041.0	11.06	mg/L	0.146	55.29	mg/L	0.729	1.32%
Mg 279.077†	36383.7	24.64	mg/L	0.165	123.2	mg/L	0.83	0.67%
Mn 257.610†	161846.9	4.474	mg/L	0.0585	22.37	mg/L	0.293	1.31%
Mo 202.031†	69.5	0.00306	mg/L	0.000186	0.01528	mg/L	0.000930	6.08%
Na 589.592†	59637.9	4.681	mg/L	0.0522	23.40	mg/L	0.261	1.11%
Na 330.237†	125.3	4.289	mg/L	0.0369	21.45	mg/L	0.184	0.86%
Ni 231.604†	1122.9	0.2721	mg/L	0.00248	1.361	mg/L	0.0124	0.91%
Pb 220.353†	20306.6	2.550	mg/L	0.0484	12.75	mg/L	0.242	1.90%
Sb 206.836†	39.5	0.00996	mg/L	0.003632	0.04979	mg/L	0.018159	36.47%
Se 196.026†	1235.7	0.8297	mg/L	0.01667	4.148	mg/L	0.0833	2.01%
Si 288.158†	5135.2	2.390	mg/L	0.0121	11.95	mg/L	0.060	0.51%
Sn 189.927†	-27.5	-0.00214	mg/L	0.001481	-0.01070	mg/L	0.007407	69.22%
Sr 421.552†	610482.4	0.6517	mg/L	0.00803	3.259	mg/L	0.0402	1.23%
Ti 334.903†	48101.4	2.306	mg/L	0.0304	11.53	mg/L	0.152	1.32%
Tl 190.801†	2021.2	0.7956	mg/L	0.02131	3.978	mg/L	0.1066	2.68%
V 292.402†	41779.2	0.3172	mg/L	0.00593	1.586	mg/L	0.0297	1.87%
Zn 206.200†	7329.2	1.808	mg/L	0.0141	9.040	mg/L	0.0707	0.78%

Sequence No.: 23
Sample ID: ~~VR33 APOST SWC~~ 222222
11-20

Autosampler Location: 352
Date Collected: 11/16/2012 3:00:12 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2106758.8	93.34	%	1.847				1.98%
ScR 361.383	269886.5	94.39	%	1.647				1.75%
Ag 328.068†	94641.5	0.5357	mg/L	0.01631	2.679	mg/L	0.0815	3.04%
Al 308.215†	113885.5	63.94	mg/L	0.899	319.7	mg/L	4.49	1.41%
As 188.979†	4047.3	2.210	mg/L	0.0401	11.05	mg/L	0.201	1.81%
B 249.677†	139.2	0.01654	mg/L	0.002373	0.08269	mg/L	0.011866	14.35%
Ba 233.527†	15750.8	3.459	mg/L	0.0777	17.30	mg/L	0.388	2.25%
Be 313.042†	352511.0	0.5299	mg/L	0.00713	2.650	mg/L	0.0356	1.35%
Ca 317.933†	624108.6	43.94	mg/L	0.547	219.7	mg/L	2.73	1.24%
Cd 228.802†	20194.9	0.6230	mg/L	0.01324	3.115	mg/L	0.0662	2.12%
Co 228.616†	21137.7	0.5934	mg/L	0.01236	2.967	mg/L	0.0618	2.08%
Cr 267.716†	3988.6	0.6414	mg/L	0.01385	3.207	mg/L	0.0693	2.16%
Cu 324.752†	179961.7	0.6948	mg/L	0.02143	3.474	mg/L	0.1071	3.08%
Fe 273.955†	101000.5	77.03	mg/L	1.003	385.1	mg/L	5.01	1.30%
K 766.490†	36995.4	18.56	mg/L	0.238	92.81	mg/L	1.192	1.28%
Mg 279.077†	45990.2	31.15	mg/L	0.670	155.7	mg/L	3.35	2.15%
Mn 257.610†	184132.4	5.090	mg/L	0.0628	25.45	mg/L	0.314	1.23%
Mo 202.031†	89.0	0.00392	mg/L	0.000008	0.01962	mg/L	0.000039	0.20%
Na 589.592†	142277.3	11.17	mg/L	0.154	55.83	mg/L	0.771	1.38%
Na 330.237†	312.8	10.72	mg/L	0.349	53.61	mg/L	1.747	3.26%
Ni 231.604†	2490.2	0.6033	mg/L	0.01317	3.017	mg/L	0.0659	2.18%
Pb 220.353†	32344.9	4.055	mg/L	0.0845	20.27	mg/L	0.422	2.08%
Sb 206.836†	52.6	0.01040	mg/L	0.002690	0.05198	mg/L	0.013452	25.88%
Se 196.026†	3222.2	2.164	mg/L	0.0432	10.82	mg/L	0.216	2.00%
Si 288.158†	4106.6	1.914	mg/L	0.0473	9.570	mg/L	0.2366	2.47%
Sn 189.927†	-31.1	-0.00206	mg/L	0.000930	-0.01028	mg/L	0.004652	45.26%
Sr 421.552†	940232.6	1.004	mg/L	0.0138	5.019	mg/L	0.0692	1.38%
Ti 334.903†	51401.9	2.464	mg/L	0.0319	12.32	mg/L	0.160	1.30%
Tl 190.801†	5259.7	2.060	mg/L	0.0429	10.30	mg/L	0.214	2.08%
V 292.402†	84340.0	0.6435	mg/L	0.01957	3.217	mg/L	0.0978	3.04%
Zn 206.200†	8928.5	2.203	mg/L	0.0469	11.01	mg/L	0.234	2.13%

Sequence No.: 24
Sample ID: VR33 MB1SPK SWC

Autosampler Location: 353
Date Collected: 11/16/2012 3:03:16 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR33 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2171374.1	96.20	%	2.033				2.11%
ScR 361.383	274831.1	96.12	%	2.171				2.26%
Ag 328.068†	96457.9	0.5460	mg/L	0.00737	1.092	mg/L	0.0147	1.35%
Al 308.215†	3870.9	2.166	mg/L	0.0405	4.331	mg/L	0.0810	1.87%
As 188.979†	3971.9	2.102	mg/L	0.0437	4.204	mg/L	0.0875	2.08%
B 249.677†	6.4	-0.00031	mg/L	0.000077	-0.00062	mg/L	0.000153	24.77%
Ba 233.527†	9879.0	2.177	mg/L	0.0394	4.355	mg/L	0.0788	1.81%
Be 313.042†	345105.1	0.5188	mg/L	0.01265	1.038	mg/L	0.0253	2.44%
Ca 317.933†	147987.5	10.42	mg/L	0.251	20.84	mg/L	0.502	2.41%
Cd 228.802†	18322.4	0.5648	mg/L	0.00789	1.130	mg/L	0.0158	1.40%
Co 228.616†	19366.7	0.5490	mg/L	0.00772	1.098	mg/L	0.0154	1.41%
Cr 267.716†	3419.2	0.5493	mg/L	0.01036	1.099	mg/L	0.0207	1.89%
Cu 324.752†	138504.2	0.5327	mg/L	0.01286	1.065	mg/L	0.0257	2.41%
Fe 273.955†	2916.5	2.221	mg/L	0.0481	4.441	mg/L	0.0962	2.17%
K 766.490†	20975.3	10.52	mg/L	0.317	21.05	mg/L	0.633	3.01%
Mg 279.077†	16091.8	10.91	mg/L	0.212	21.83	mg/L	0.424	1.94%
Mn 257.610†	19923.2	0.5511	mg/L	0.01087	1.102	mg/L	0.0217	1.97%
Mo 202.031†	23.2	0.00101	mg/L	0.000208	0.00203	mg/L	0.000416	20.50%
Na 589.592†	129121.7	10.13	mg/L	0.258	20.27	mg/L	0.517	2.55%
Na 330.237†	300.6	10.29	mg/L	0.211	20.58	mg/L	0.422	2.05%
Ni 231.604†	2286.1	0.5538	mg/L	0.00961	1.108	mg/L	0.0192	1.74%
Pb 220.353†	16752.9	2.095	mg/L	0.0331	4.189	mg/L	0.0661	1.58%
Sb 206.836†	23.8	0.00148	mg/L	0.000629	0.00297	mg/L	0.001258	42.37%
Se 196.026†	3130.4	2.102	mg/L	0.0437	4.204	mg/L	0.0875	2.08%
Si 288.158†	2.4	0.00453	mg/L	0.002821	0.00906	mg/L	0.005643	62.25%
Sn 189.927†	-23.8	-0.00473	mg/L	0.000530	-0.00947	mg/L	0.001060	11.19%
Sr 421.552†	480735.9	0.5132	mg/L	0.01334	1.026	mg/L	0.0267	2.60%
Ti 334.903†	44.9	0.00155	mg/L	0.000232	0.00309	mg/L	0.000464	14.99%
Tl 190.801†	5273.4	2.058	mg/L	0.0412	4.115	mg/L	0.0825	2.00%
V 292.402†	71334.2	0.5471	mg/L	0.00729	1.094	mg/L	0.0146	1.33%
Zn 206.200†	2103.8	0.5190	mg/L	0.00928	1.038	mg/L	0.0186	1.79%

Sequence No.: 25
Sample ID: CV 10

Autosampler Location: 7
Date Collected: 11/16/2012 3:07:17 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2055025.7	91.04	%	2.792				3.07%
ScR 361.383	261665.3	91.51	%	1.381				1.51%
Ag 328.068†	191730.1	1.085	mg/L	0.0335	1.085	mg/L	0.0335	3.08%
Al 308.215†	4066.5	2.245	mg/L	0.0445	2.245	mg/L	0.0445	1.98%
As 188.979†	4099.2	2.197	mg/L	0.0743	2.197	mg/L	0.0743	3.38%
B 249.677†	8397.5	1.071	mg/L	0.0194	1.071	mg/L	0.0194	1.81%
Ba 233.527†	5130.9	1.131	mg/L	0.0189	1.131	mg/L	0.0189	1.67%
Be 313.042†	704411.6	1.059	mg/L	0.0245	1.059	mg/L	0.0245	2.32%
Ca 317.933†	30605.7	2.155	mg/L	0.0465	2.155	mg/L	0.0465	2.16%
Cd 228.802†	37055.5	1.156	mg/L	0.0353	1.156	mg/L	0.0353	3.06%
Co 228.616†	39931.6	1.130	mg/L	0.0342	1.130	mg/L	0.0342	3.02%
Cr 267.716†	7111.9	1.144	mg/L	0.0196	1.144	mg/L	0.0196	1.72%
Cu 324.752†	292706.7	1.125	mg/L	0.0346	1.125	mg/L	0.0346	3.08%
Fe 273.955†	3045.8	2.315	mg/L	0.0393	2.315	mg/L	0.0393	1.70%
K 766.490†	44016.9	22.08	mg/L	0.500	22.08	mg/L	0.500	2.26%
Mg 279.077†	3321.3	2.260	mg/L	0.0384	2.260	mg/L	0.0384	1.70%
Mn 257.610†	40215.4	1.112	mg/L	0.0259	1.112	mg/L	0.0259	2.33%
Mo 202.031†	23113.1	1.152	mg/L	0.0381	1.152	mg/L	0.0381	3.31%
Na 589.592†	689160.7	54.09	mg/L	1.309	54.09	mg/L	1.309	2.42%
Na 330.237†	1648.0	57.24	mg/L	1.033	57.24	mg/L	1.033	1.80%
Ni 231.604†	4433.3	1.076	mg/L	0.0174	1.076	mg/L	0.0174	1.62%
Pb 220.353†	17944.9	2.244	mg/L	0.0750	2.244	mg/L	0.0750	3.34%
Sb 206.836†	7743.5	2.367	mg/L	0.0820	2.367	mg/L	0.0820	3.46%
Se 196.026†	3230.3	2.168	mg/L	0.0718	2.168	mg/L	0.0718	3.31%
Si 288.158†	4989.8	2.318	mg/L	0.0510	2.318	mg/L	0.0510	2.20%
Sn 189.927†	4430.3	1.138	mg/L	0.0388	1.138	mg/L	0.0388	3.41%
Sr 421.552†	991814.1	1.059	mg/L	0.0241	1.059	mg/L	0.0241	2.28%
Ti 334.903†	23528.3	1.128	mg/L	0.0253	1.128	mg/L	0.0253	2.25%
Tl 190.801†	5552.4	2.163	mg/L	0.0759	2.163	mg/L	0.0759	3.51%
V 292.402†	146501.5	1.124	mg/L	0.0343	1.124	mg/L	0.0343	3.05%
Zn 206.200†	4501.3	1.110	mg/L	0.0188	1.110	mg/L	0.0188	1.70%

Sequence No.: 26
Sample ID: CB 10
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 3:12:09 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2175282.2	96.37	%	0.499				0.52%
ScR 361.383	269291.1	94.18	%	1.388				1.47%
Ag 328.068†	42.6	0.00024	mg/L	0.000194	0.00024	mg/L	0.000194	80.56%
Al 308.215†	61.2	0.03435	mg/L	0.015204	0.03435	mg/L	0.015204	44.26%
As 188.979†	-1.4	-0.00071	mg/L	0.001499	-0.00071	mg/L	0.001499	211.70%
B 249.677†	8.0	0.00102	mg/L	0.000142	0.00102	mg/L	0.000142	13.91%
Ba 233.527†	0.2	0.00004	mg/L	0.000226	0.00004	mg/L	0.000226	641.23%
Be 313.042†	256.6	0.00039	mg/L	0.000075	0.00039	mg/L	0.000075	19.46%
Ca 317.933†	99.2	0.00699	mg/L	0.001601	0.00699	mg/L	0.001601	22.92%
Cd 228.802†	-3.5	-0.00010	mg/L	0.000127	-0.00010	mg/L	0.000127	122.33%
Co 228.616†	-8.3	-0.00024	mg/L	0.000094	-0.00024	mg/L	0.000094	39.63%
Cr 267.716†	-16.2	-0.00261	mg/L	0.000392	-0.00261	mg/L	0.000392	15.01%
Cu 324.752†	49.4	0.00019	mg/L	0.000143	0.00019	mg/L	0.000143	75.32%
Fe 273.955†	18.6	0.01422	mg/L	0.002404	0.01422	mg/L	0.002404	16.91%
K 766.490†	50.7	0.02545	mg/L	0.018499	0.02545	mg/L	0.018499	72.69%
Mg 279.077†	16.9	0.01148	mg/L	0.005517	0.01148	mg/L	0.005517	48.04%
Mn 257.610†	32.3	0.00089	mg/L	0.000095	0.00089	mg/L	0.000095	10.62%
Mo 202.031†	13.8	0.00069	mg/L	0.000200	0.00069	mg/L	0.000200	29.05%
Na 589.592†	110.9	0.00870	mg/L	0.002901	0.00870	mg/L	0.002901	33.33%
Na 330.237†	-35.9	-1.249	mg/L	0.5677	-1.249	mg/L	0.5677	45.45%
Ni 231.604†	3.4	0.00083	mg/L	0.001081	0.00083	mg/L	0.001081	130.05%
Pb 220.353†	11.3	0.00142	mg/L	0.000222	0.00142	mg/L	0.000222	15.62%
Sb 206.836†	13.9	0.00427	mg/L	0.001452	0.00427	mg/L	0.001452	34.01%
Se 196.026†	4.2	0.00282	mg/L	0.003440	0.00282	mg/L	0.003440	122.00%
Si 288.158†	6.3	0.00291	mg/L	0.001165	0.00291	mg/L	0.001165	39.98%
Sn 189.927†	-2.6	-0.00066	mg/L	0.000734	-0.00066	mg/L	0.000734	110.79%
Sr 421.552†	296.3	0.00032	mg/L	0.000076	0.00032	mg/L	0.000076	24.10%
Ti 334.903†	18.4	0.00088	mg/L	0.000893	0.00088	mg/L	0.000893	100.98%
Tl 190.801†	2.4	0.00094	mg/L	0.001042	0.00094	mg/L	0.001042	111.11%
V 292.402†	-9.9	-0.00009	mg/L	0.000113	-0.00009	mg/L	0.000113	129.39%
Zn 206.200†	1.5	0.00036	mg/L	0.000684	0.00036	mg/L	0.000684	189.09%

User canceled analysis.

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Analysis Begun

Start Time: 11/16/2012 3:17:17 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: CV 11
Autosampler Location: 7
Date Collected: 11/16/2012 3:17:19 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2205026.8	97.69	%	0.284				0.29%
ScR 361.383	272599.1	95.34	%	1.404				1.47%
Ag 328.068†	176087.0	0.9967	mg/L	0.00337	0.9967	mg/L	0.00337	0.34%
Al 308.215†	3808.9	2.103	mg/L	0.0311	2.103	mg/L	0.0311	1.48%
As 188.979†	3802.1	2.040	mg/L	0.0104	2.040	mg/L	0.0104	0.51%
B 249.677†	7846.6	1.000	mg/L	0.0077	1.000	mg/L	0.0077	0.77%
Ba 233.527†	4799.5	1.057	mg/L	0.0099	1.057	mg/L	0.0099	0.93%
Be 313.042†	675105.6	1.015	mg/L	0.0226	1.015	mg/L	0.0226	2.23%
Ca 317.933†	30281.1	2.132	mg/L	0.0182	2.132	mg/L	0.0182	0.85%
Cd 228.802†	34067.4	1.063	mg/L	0.0036	1.063	mg/L	0.0036	0.34%
Co 228.616†	36804.5	1.042	mg/L	0.0037	1.042	mg/L	0.0037	0.35%
Cr 267.716†	6627.2	1.066	mg/L	0.0064	1.066	mg/L	0.0064	0.60%
Cu 324.752†	268747.6	1.033	mg/L	0.0036	1.033	mg/L	0.0036	0.35%
Fe 273.955†	2839.6	2.159	mg/L	0.0239	2.159	mg/L	0.0239	1.11%
K 766.490†	42213.9	21.18	mg/L	0.438	21.18	mg/L	0.438	2.07%
Mg 279.077†	3080.5	2.096	mg/L	0.0277	2.096	mg/L	0.0277	1.32%
Mn 257.610†	39317.4	1.087	mg/L	0.0127	1.087	mg/L	0.0127	1.17%
Mo 202.031†	21334.1	1.063	mg/L	0.0072	1.063	mg/L	0.0072	0.68%
Na 589.592†	661887.1	51.95	mg/L	1.089	51.95	mg/L	1.089	2.10%
Na 330.237†	1538.3	53.44	mg/L	0.370	53.44	mg/L	0.370	0.69%
Ni 231.604†	4172.5	1.013	mg/L	0.0079	1.013	mg/L	0.0079	0.78%
Pb 220.353†	16580.1	2.073	mg/L	0.0125	2.073	mg/L	0.0125	0.60%
Sb 206.836†	7154.3	2.187	mg/L	0.0134	2.187	mg/L	0.0134	0.61%
Se 196.026†	2995.3	2.011	mg/L	0.0045	2.011	mg/L	0.0045	0.22%
Si 288.158†	4679.7	2.174	mg/L	0.0196	2.174	mg/L	0.0196	0.90%
Sn 189.927†	4095.3	1.052	mg/L	0.0056	1.052	mg/L	0.0056	0.53%
Sr 421.552†	951999.3	1.016	mg/L	0.0225	1.016	mg/L	0.0225	2.21%
Ti 334.903†	23080.8	1.106	mg/L	0.0116	1.106	mg/L	0.0116	1.04%
Tl 190.801†	5143.2	2.003	mg/L	0.0138	2.003	mg/L	0.0138	0.69%
V 292.402†	134695.1	1.033	mg/L	0.0027	1.033	mg/L	0.0027	0.26%
Zn 206.200†	4209.8	1.038	mg/L	0.0114	1.038	mg/L	0.0114	1.10%

Sequence No.: 2
Sample ID: CB

Autosampler Location: 1
Date Collected: 11/16/2012 3:21:25 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2205990.5	97.73	%	0.524				0.54%
ScR 361.383	282658.6	98.86	%	0.999				1.01%
Ag 328.068†	80.4	0.00046	mg/L	0.000091	0.00046	mg/L	0.000091	19.98%
Al 308.215†	32.9	0.01847	mg/L	0.003273	0.01847	mg/L	0.003273	17.72%
As 188.979†	-0.2	-0.00006	mg/L	0.002036	-0.00006	mg/L	0.002036	>999.9%
B 249.677†	10.2	0.00130	mg/L	0.001198	0.00130	mg/L	0.001198	92.13%
Ba 233.527†	0.2	0.00004	mg/L	0.000486	0.00004	mg/L	0.000486	>999.9%
Be 313.042†	246.5	0.00037	mg/L	0.000039	0.00037	mg/L	0.000039	10.47%
Ca 317.933†	88.0	0.00619	mg/L	0.000185	0.00619	mg/L	0.000185	2.98%
Cd 228.802†	-4.3	-0.00014	mg/L	0.000052	-0.00014	mg/L	0.000052	37.80%
Co 228.616†	-7.8	-0.00022	mg/L	0.000129	-0.00022	mg/L	0.000129	57.82%
Cr 267.716†	-6.5	-0.00105	mg/L	0.000598	-0.00105	mg/L	0.000598	56.73%
Cu 324.752†	92.6	0.00036	mg/L	0.000061	0.00036	mg/L	0.000061	17.27%
Fe 273.955†	16.2	0.01239	mg/L	0.001815	0.01239	mg/L	0.001815	14.65%
K 766.490†	-12.4	-0.00621	mg/L	0.019972	-0.00621	mg/L	0.019972	321.49%
Mg 279.077†	11.7	0.00792	mg/L	0.002414	0.00792	mg/L	0.002414	30.47%
Mn 257.610†	19.7	0.00054	mg/L	0.000171	0.00054	mg/L	0.000171	31.49%
Mo 202.031†	16.6	0.00083	mg/L	0.000292	0.00083	mg/L	0.000292	35.21%
Na 589.592†	123.6	0.00970	mg/L	0.002894	0.00970	mg/L	0.002894	29.82%
Na 330.237†	-11.2	-0.3904	mg/L	0.11278	-0.3904	mg/L	0.11278	28.89%
Ni 231.604†	-5.2	-0.00126	mg/L	0.000973	-0.00126	mg/L	0.000973	77.51%
Pb 220.353†	10.3	0.00129	mg/L	0.000551	0.00129	mg/L	0.000551	42.74%
Sb 206.836†	7.7	0.00236	mg/L	0.002133	0.00236	mg/L	0.002133	90.21%
Se 196.026†	5.2	0.00352	mg/L	0.002450	0.00352	mg/L	0.002450	69.67%
Si 288.158†	4.9	0.00229	mg/L	0.002917	0.00229	mg/L	0.002917	127.24%
Sn 189.927†	-2.9	-0.00073	mg/L	0.001055	-0.00073	mg/L	0.001055	144.00%
Sr 421.552†	331.2	0.00035	mg/L	0.000007	0.00035	mg/L	0.000007	2.12%
Ti 334.903†	25.9	0.00124	mg/L	0.000343	0.00124	mg/L	0.000343	27.62%
Tl 190.801†	7.0	0.00274	mg/L	0.002116	0.00274	mg/L	0.002116	77.25%
V 292.402†	-1.8	-0.00002	mg/L	0.000081	-0.00002	mg/L	0.000081	427.06%
Zn 206.200†	-1.7	-0.00041	mg/L	0.000299	-0.00041	mg/L	0.000299	72.41%

User canceled analysis.

Analysis Begun

Start Time: 11/16/2012 3:27:02 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 11/16/2012 7:13:09 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1116.sif
Batch ID:
Results Data Set: I2121116
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VR33 E SWC
Autosampler Location: 354
Date Collected: 11/16/2012 3:27:03 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 E SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2192953.1	97.15	%	0.867				0.89%
ScR 361.383	285480.3	99.84	%	1.018				1.02%
Ag 328.068†	-67.9	-0.00034	mg/L	0.000223	-0.00171	mg/L	0.001115	65.30%
Al 308.215†	116911.9	65.64	mg/L	0.609	328.2	mg/L	3.04	0.93%
As 188.979†	31.7	0.08177	mg/L	0.001483	0.4089	mg/L	0.00742	1.81%
B 249.677†	52.7	0.00661	mg/L	0.000896	0.03304	mg/L	0.004482	13.57%
Ba 233.527†	5816.7	1.264	mg/L	0.0172	6.322	mg/L	0.0858	1.36%
Be 313.042†	1667.7	0.00245	mg/L	0.000041	0.01225	mg/L	0.000203	1.66%
Ca 317.933†	327589.0	23.06	mg/L	0.264	115.3	mg/L	1.32	1.15%
Cd 228.802†	985.6	0.03005	mg/L	0.000648	0.1503	mg/L	0.00324	2.16%
Co 228.616†	2027.7	0.05150	mg/L	0.000671	0.2575	mg/L	0.00335	1.30%
Cr 267.716†	895.9	0.1457	mg/L	0.00143	0.7287	mg/L	0.00714	0.98%
Cu 324.752†	32206.7	0.1280	mg/L	0.00078	0.6398	mg/L	0.00391	0.61%
Fe 273.955†	141674.9	108.1	mg/L	1.20	540.3	mg/L	6.00	1.11%
K 766.490†	24541.9	12.31	mg/L	0.089	61.56	mg/L	0.446	0.72%
Mg 279.077†	35208.8	23.82	mg/L	0.284	119.1	mg/L	1.42	1.19%
Mn 257.610†	153157.4	4.234	mg/L	0.0416	21.17	mg/L	0.208	0.98%
Mo 202.031†	70.9	0.00328	mg/L	0.000128	0.01638	mg/L	0.000641	3.91%
Na 589.592†	5658.8	0.4441	mg/L	0.00545	2.221	mg/L	0.0272	1.23%
Na 330.237†	-8.3	-0.1790	mg/L	0.08433	-0.8950	mg/L	0.42166	47.11%
Ni 231.604†	401.8	0.09751	mg/L	0.000756	0.4876	mg/L	0.00378	0.78%
Pb 220.353†	8709.3	1.100	mg/L	0.0115	5.499	mg/L	0.0574	1.04%
Sb 206.836†	32.7	0.00945	mg/L	0.001535	0.04727	mg/L	0.007673	16.23%
Se 196.026†	8.4	0.00552	mg/L	0.001830	0.02759	mg/L	0.009151	33.17%
Si 288.158†	2633.1	1.226	mg/L	0.0091	6.132	mg/L	0.0457	0.74%
Sn 189.927†	-31.7	-0.00492	mg/L	0.001017	-0.02458	mg/L	0.005083	20.68%
Sr 421.552†	204028.1	0.2178	mg/L	0.00178	1.089	mg/L	0.0089	0.82%
Ti 334.903†	48407.2	2.322	mg/L	0.0244	11.61	mg/L	0.122	1.05%
Tl 190.801†	-24.0	0.00129	mg/L	0.003075	0.00644	mg/L	0.015377	238.78%
V 292.402†	19516.2	0.1452	mg/L	0.00063	0.7260	mg/L	0.00316	0.44%
Zn 206.200†	5140.3	1.268	mg/L	0.0154	6.340	mg/L	0.0772	1.22%

Sequence No.: 2
Sample ID: VR33 F SWC

Autosampler Location: 355
Date Collected: 11/16/2012 3:31:05 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VR33 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2162550.8	95.81	%	0.881				0.92%
ScR 361.383	280731.6	98.18	%	2.130				2.17%
Ag 328.068†	-304.8	-0.00168	mg/L	0.000052	-0.00841	mg/L	0.000258	3.07%
Al 308.215†	123974.1	69.61	mg/L	1.960	348.0	mg/L	9.80	2.82%
As 188.979†	-33.5	0.05652	mg/L	0.003227	0.2826	mg/L	0.01614	5.71%
B 249.677†	56.8	0.00713	mg/L	0.000964	0.03564	mg/L	0.004821	13.53%
Ba 233.527†	5706.2	1.240	mg/L	0.0236	6.200	mg/L	0.1178	1.90%
Be 313.042†	1614.7	0.00237	mg/L	0.000076	0.01183	mg/L	0.000382	3.23%
Ca 317.933†	276299.3	19.45	mg/L	0.573	97.26	mg/L	2.867	2.95%
Cd 228.802†	345.8	0.01007	mg/L	0.000367	0.05037	mg/L	0.001837	3.65%
Co 228.616†	2051.8	0.05155	mg/L	0.000705	0.2578	mg/L	0.00353	1.37%
Cr 267.716†	862.5	0.1406	mg/L	0.00261	0.7028	mg/L	0.01307	1.86%
Cu 324.752†	30082.0	0.1198	mg/L	0.00121	0.5989	mg/L	0.00605	1.01%
Fe 273.955†	143362.5	109.3	mg/L	2.73	546.7	mg/L	13.63	2.49%
K 766.490†	23335.8	11.71	mg/L	0.340	58.54	mg/L	1.698	2.90%
Mg 279.077†	34307.1	23.21	mg/L	0.677	116.0	mg/L	3.39	2.92%
Mn 257.610†	142265.7	3.933	mg/L	0.1003	19.66	mg/L	0.501	2.55%
Mo 202.031†	63.9	0.00296	mg/L	0.000251	0.01482	mg/L	0.001253	8.45%
Na 589.592†	7038.2	0.5524	mg/L	0.01984	2.762	mg/L	0.0992	3.59%
Na 330.237†	-18.8	-0.2617	mg/L	0.08952	-1.309	mg/L	0.4476	34.20%
Ni 231.604†	409.4	0.09934	mg/L	0.002616	0.4967	mg/L	0.01308	2.63%
Pb 220.353†	3619.7	0.4646	mg/L	0.00437	2.323	mg/L	0.0219	0.94%
Sb 206.836†	26.3	0.00772	mg/L	0.002889	0.03861	mg/L	0.014447	37.42%
Se 196.026†	7.3	0.00477	mg/L	0.004039	0.02384	mg/L	0.020194	84.69%
Si 288.158†	2356.0	1.098	mg/L	0.0263	5.488	mg/L	0.1314	2.39%
Sn 189.927†	-26.6	-0.00402	mg/L	0.001034	-0.02009	mg/L	0.005171	25.73%
Sr 421.552†	179489.5	0.1916	mg/L	0.00530	0.9580	mg/L	0.02652	2.77%
Ti 334.903†	55019.3	2.639	mg/L	0.0728	13.19	mg/L	0.364	2.76%
Tl 190.801†	-27.0	0.00025	mg/L	0.000664	0.00124	mg/L	0.003322	267.21%
V 292.402†	19913.7	0.1479	mg/L	0.00180	0.7397	mg/L	0.00901	1.22%
Zn 206.200†	2579.9	0.6364	mg/L	0.01275	3.182	mg/L	0.0637	2.00%

Sequence No.: 3
Sample ID: VR33 G SWC

Autosampler Location: 356
Date Collected: 11/16/2012 3:35:06 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2149000.4	95.21	%	2.096				2.20%
ScR 361.383	277546.2	97.07	%	1.176				1.21%
Ag 328.068†	-368.3	-0.00203	mg/L	0.000277	-0.01015	mg/L	0.001387	13.67%
Al 308.215†	157873.8	88.64	mg/L	1.322	443.2	mg/L	6.61	1.49%
As 188.979†	-164.0	0.02536	mg/L	0.002497	0.1268	mg/L	0.01248	9.84%
B 249.677†	37.5	0.00467	mg/L	0.000465	0.02335	mg/L	0.002325	9.96%
Ba 233.527†	3839.6	0.8283	mg/L	0.01485	4.142	mg/L	0.0743	1.79%
Be 313.042†	1728.2	0.00251	mg/L	0.000075	0.01257	mg/L	0.000377	3.00%
Ca 317.933†	191883.2	13.51	mg/L	0.196	67.55	mg/L	0.982	1.45%
Cd 228.802†	39.2	0.00084	mg/L	0.000140	0.00421	mg/L	0.000699	16.61%
Co 228.616†	2060.9	0.04930	mg/L	0.001090	0.2465	mg/L	0.00545	2.21%
Cr 267.716†	884.3	0.1442	mg/L	0.00157	0.7209	mg/L	0.00785	1.09%
Cu 324.752†	25479.5	0.1018	mg/L	0.00237	0.5092	mg/L	0.01184	2.33%
Fe 273.955†	144334.2	110.1	mg/L	1.71	550.4	mg/L	8.53	1.55%
K 766.490†	20327.2	10.20	mg/L	0.091	50.99	mg/L	0.453	0.89%
Mg 279.077†	36122.6	24.44	mg/L	0.329	122.2	mg/L	1.65	1.35%
Mn 257.610†	88408.9	2.444	mg/L	0.0401	12.22	mg/L	0.200	1.64%
Mo 202.031†	44.4	0.00206	mg/L	0.000144	0.01030	mg/L	0.000722	7.01%
Na 589.592†	8363.1	0.6564	mg/L	0.01040	3.282	mg/L	0.0520	1.58%
Na 330.237†	-36.4	-0.4513	mg/L	0.23420	-2.257	mg/L	1.1710	51.89%
Ni 231.604†	397.5	0.09647	mg/L	0.000704	0.4823	mg/L	0.00352	0.73%
Pb 220.353†	379.3	0.06422	mg/L	0.001862	0.3211	mg/L	0.00931	2.90%
Sb 206.836†	18.7	0.00606	mg/L	0.001628	0.03029	mg/L	0.008142	26.88%
Se 196.026†	10.4	0.00682	mg/L	0.005257	0.03412	mg/L	0.026284	77.04%
Si 288.158†	3345.7	1.557	mg/L	0.0221	7.787	mg/L	0.1103	1.42%
Sn 189.927†	-29.1	-0.00522	mg/L	0.000608	-0.02612	mg/L	0.003038	11.63%
Sr 421.552†	118942.3	0.1270	mg/L	0.00194	0.6349	mg/L	0.00972	1.53%
Ti 334.903†	82362.8	3.951	mg/L	0.0625	19.76	mg/L	0.312	1.58%
Tl 190.801†	-29.5	-0.00079	mg/L	0.002695	-0.00397	mg/L	0.013473	339.07%
V 292.402†	24781.7	0.1841	mg/L	0.00397	0.9207	mg/L	0.01986	2.16%
Zn 206.200†	1040.2	0.2566	mg/L	0.00432	1.283	mg/L	0.0216	1.68%

Sequence No.: 4
Sample ID: VR33 H SWC

Autosampler Location: 357
Date Collected: 11/16/2012 3:39:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 H SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2160590.0	95.72	%	0.801				0.84%
ScR 361.383	274029.0	95.84	%	1.027				1.07%
Ag 328.068†	-312.3	-0.00172	mg/L	0.000135	-0.00858	mg/L	0.000675	7.87%
Al 308.215†	124374.0	69.83	mg/L	0.719	349.1	mg/L	3.59	1.03%
As 188.979†	-140.0	0.02483	mg/L	0.003095	0.1242	mg/L	0.01547	12.46%
B 249.677†	21.2	0.00262	mg/L	0.000402	0.01309	mg/L	0.002009	15.34%
Ba 233.527†	3463.2	0.7475	mg/L	0.00452	3.737	mg/L	0.0226	0.60%
Be 313.042†	1463.3	0.00212	mg/L	0.000031	0.01061	mg/L	0.000155	1.46%
Ca 317.933†	204587.4	14.40	mg/L	0.118	72.02	mg/L	0.591	0.82%
Cd 228.802†	36.0	0.00079	mg/L	0.000134	0.00394	mg/L	0.000669	16.98%
Co 228.616†	1714.7	0.04054	mg/L	0.000671	0.2027	mg/L	0.00335	1.65%
Cr 267.716†	1006.7	0.1636	mg/L	0.00129	0.8179	mg/L	0.00645	0.79%
Cu 324.752†	21326.1	0.08540	mg/L	0.001115	0.4270	mg/L	0.00557	1.31%
Fe 273.955†	127419.5	97.18	mg/L	1.193	485.9	mg/L	5.97	1.23%
K 766.490†	18651.1	9.358	mg/L	0.0903	46.79	mg/L	0.451	0.96%
Mg 279.077†	33540.3	22.69	mg/L	0.178	113.5	mg/L	0.89	0.78%
Mn 257.610†	64351.1	1.779	mg/L	0.0210	8.895	mg/L	0.1049	1.18%
Mo 202.031†	116.0	0.00562	mg/L	0.000212	0.02809	mg/L	0.001058	3.77%
Na 589.592†	8126.6	0.6378	mg/L	0.00757	3.189	mg/L	0.0379	1.19%
Na 330.237†	-32.3	-0.3907	mg/L	0.08328	-1.954	mg/L	0.4164	21.31%
Ni 231.604†	426.0	0.1034	mg/L	0.00102	0.5169	mg/L	0.00509	0.98%
Pb 220.353†	306.7	0.05122	mg/L	0.001091	0.2561	mg/L	0.00545	2.13%
Sb 206.836†	16.1	0.00473	mg/L	0.002050	0.02365	mg/L	0.010251	43.35%
Se 196.026†	6.1	0.00398	mg/L	0.001601	0.01989	mg/L	0.008005	40.25%
Si 288.158†	2868.7	1.336	mg/L	0.0132	6.678	mg/L	0.0659	0.99%
Sn 189.927†	-31.7	-0.00584	mg/L	0.000557	-0.02922	mg/L	0.002784	9.53%
Sr 421.552†	120004.4	0.1281	mg/L	0.00127	0.6405	mg/L	0.00635	0.99%
Ti 334.903†	72800.9	3.492	mg/L	0.0340	17.46	mg/L	0.170	0.97%
Tl 190.801†	-22.0	0.00084	mg/L	0.002591	0.00422	mg/L	0.012957	307.34%
V 292.402†	23274.8	0.1733	mg/L	0.00207	0.8666	mg/L	0.01033	1.19%
Zn 206.200†	775.6	0.1913	mg/L	0.00094	0.9566	mg/L	0.00472	0.49%

Sequence No.: 5
Sample ID: VR33 I SWC

Autosampler Location: 358
Date Collected: 11/16/2012 3:43:08 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2144634.0	95.01	%	0.784				0.83%
ScR 361.383	276532.6	96.71	%	3.570				3.69%
Ag 328.068†	-173.5	-0.00093	mg/L	0.000219	-0.00466	mg/L	0.001097	23.52%
Al 308.215†	104236.3	58.52	mg/L	2.171	292.6	mg/L	10.85	3.71%
As 188.979†	-84.5	0.04252	mg/L	0.005135	0.2126	mg/L	0.02567	12.07%
B 249.677†	116.7	0.01480	mg/L	0.000920	0.07401	mg/L	0.004598	6.21%
Ba 233.527†	3104.4	0.6700	mg/L	0.02386	3.350	mg/L	0.1193	3.56%
Be 313.042†	1459.0	0.00212	mg/L	0.000130	0.01061	mg/L	0.000648	6.11%
Ca 317.933†	422815.7	29.77	mg/L	1.074	148.8	mg/L	5.37	3.61%
Cd 228.802†	490.5	0.01500	mg/L	0.000379	0.07499	mg/L	0.001893	2.52%
Co 228.616†	1543.9	0.03657	mg/L	0.000480	0.1829	mg/L	0.00240	1.31%
Cr 267.716†	651.4	0.1059	mg/L	0.00307	0.5293	mg/L	0.01535	2.90%
Cu 324.752†	24014.2	0.09538	mg/L	0.000581	0.4769	mg/L	0.00291	0.61%
Fe 273.955†	114185.6	87.09	mg/L	3.042	435.4	mg/L	15.21	3.49%
K 766.490†	27936.0	14.02	mg/L	0.571	70.08	mg/L	2.855	4.07%
Mg 279.077†	32017.0	21.67	mg/L	0.807	108.3	mg/L	4.04	3.73%
Mn 257.610†	82839.9	2.290	mg/L	0.0787	11.45	mg/L	0.393	3.44%
Mo 202.031†	63.3	0.00283	mg/L	0.000333	0.01414	mg/L	0.001666	11.79%
Na 589.592†	8089.0	0.6349	mg/L	0.02137	3.174	mg/L	0.1068	3.37%
Na 330.237†	-19.1	-0.2087	mg/L	0.11961	-1.043	mg/L	0.5981	57.33%
Ni 231.604†	266.8	0.06473	mg/L	0.000922	0.3237	mg/L	0.00461	1.42%
Pb 220.353†	4375.5	0.5573	mg/L	0.00520	2.787	mg/L	0.0260	0.93%
Sb 206.836†	15.3	0.00511	mg/L	0.000766	0.02557	mg/L	0.003828	14.97%
Se 196.026†	2.9	0.00184	mg/L	0.005706	0.00920	mg/L	0.028529	310.26%
Si 288.158†	2682.1	1.249	mg/L	0.0445	6.244	mg/L	0.2225	3.56%
Sn 189.927†	-42.1	-0.00666	mg/L	0.000643	-0.03328	mg/L	0.003213	9.65%
Sr 421.552†	261012.8	0.2786	mg/L	0.00999	1.393	mg/L	0.0500	3.59%
Ti 334.903†	64881.4	3.112	mg/L	0.1148	15.56	mg/L	0.574	3.69%
Tl 190.801†	-20.0	0.00061	mg/L	0.000894	0.00307	mg/L	0.004470	145.59%
V 292.402†	22503.2	0.1678	mg/L	0.00114	0.8392	mg/L	0.00568	0.68%
Zn 206.200†	3121.7	0.7701	mg/L	0.02808	3.850	mg/L	0.1404	3.65%

Sequence No.: 6
Sample ID: VR33 J SWC

Autosampler Location: 359
Date Collected: 11/16/2012 3:47:09 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 J SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2187581.6	96.92	%	0.754				0.78%
ScR 361.383	280519.8	98.11	%	1.353				1.38%
Ag 328.068†	-91.6	-0.00045	mg/L	0.000027	-0.00227	mg/L	0.000137	6.05%
Al 308.215†	111572.9	62.64	mg/L	1.249	313.2	mg/L	6.24	1.99%
As 188.979†	-20.0	0.09814	mg/L	0.002726	0.4907	mg/L	0.01363	2.78%
B 249.677†	44.8	0.00560	mg/L	0.001049	0.02799	mg/L	0.005247	18.74%
Ba 233.527†	2641.4	0.5658	mg/L	0.00686	2.829	mg/L	0.0343	1.21%
Be 313.042†	1522.7	0.00220	mg/L	0.000075	0.01099	mg/L	0.000377	3.43%
Ca 317.933†	262712.6	18.50	mg/L	0.375	92.48	mg/L	1.877	2.03%
Cd 228.802†	1487.2	0.04611	mg/L	0.000364	0.2305	mg/L	0.00182	0.79%
Co 228.616†	2070.1	0.04993	mg/L	0.000476	0.2496	mg/L	0.00238	0.95%
Cr 267.716†	827.5	0.1339	mg/L	0.00150	0.6694	mg/L	0.00751	1.12%
Cu 324.752†	43903.8	0.1722	mg/L	0.00170	0.8610	mg/L	0.00851	0.99%
Fe 273.955†	131046.4	99.95	mg/L	2.398	499.7	mg/L	11.99	2.40%
K 766.490†	23597.7	11.84	mg/L	0.200	59.20	mg/L	0.999	1.69%
Mg 279.077†	46875.2	31.73	mg/L	0.658	158.7	mg/L	3.29	2.07%
Mn 257.610†	99026.3	2.738	mg/L	0.0620	13.69	mg/L	0.310	2.27%
Mo 202.031†	49.2	0.00224	mg/L	0.000273	0.01121	mg/L	0.001364	12.16%
Na 589.592†	8063.0	0.6328	mg/L	0.00791	3.164	mg/L	0.0395	1.25%
Na 330.237†	-16.3	-0.2206	mg/L	0.26292	-1.103	mg/L	1.3146	119.21%
Ni 231.604†	270.2	0.06556	mg/L	0.000253	0.3278	mg/L	0.00126	0.39%
Pb 220.353†	13726.5	1.726	mg/L	0.0095	8.632	mg/L	0.0475	0.55%
Sb 206.836†	35.3	0.01143	mg/L	0.000782	0.05717	mg/L	0.003909	6.84%
Se 196.026†	9.6	0.00628	mg/L	0.004233	0.03140	mg/L	0.021165	67.40%
Si 288.158†	2522.0	1.176	mg/L	0.0195	5.879	mg/L	0.0973	1.65%
Sn 189.927†	-6.7	0.00119	mg/L	0.001439	0.00594	mg/L	0.007197	121.06%
Sr 421.552†	161857.9	0.1728	mg/L	0.00330	0.8639	mg/L	0.01649	1.91%
Ti 334.903†	80050.7	3.840	mg/L	0.0786	19.20	mg/L	0.393	2.05%
Tl 190.801†	-18.6	0.00227	mg/L	0.000087	0.01133	mg/L	0.000436	3.85%
V 292.402†	29566.8	0.2211	mg/L	0.00271	1.106	mg/L	0.0136	1.23%
Zn 206.200†	6477.5	1.598	mg/L	0.0293	7.990	mg/L	0.1465	1.83%

Sequence No.: 7
Sample ID: VR33 K SWC

Autosampler Location: 360
Date Collected: 11/16/2012 3:51:10 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 K SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR33 K SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2196733.4	97.32	%	4.315				4.43%
ScR 361.383	278230.8	97.31	%	1.872				1.92%
Ag 328.068†	-84.0	-0.00044	mg/L	0.000124	-0.00220	mg/L	0.000620	28.23%
Al 308.215†	99829.7	56.05	mg/L	1.211	280.2	mg/L	6.05	2.16%
As 188.979†	-31.7	0.05383	mg/L	0.001389	0.2691	mg/L	0.00694	2.58%
B 249.677†	98.6	0.01251	mg/L	0.000370	0.06254	mg/L	0.001852	2.96%
Ba 233.527†	3902.4	0.8475	mg/L	0.01643	4.237	mg/L	0.0822	1.94%
Be 313.042†	1433.2	0.00210	mg/L	0.000063	0.01050	mg/L	0.000313	2.98%
Ca 317.933†	432413.3	30.44	mg/L	0.673	152.2	mg/L	3.36	2.21%
Cd 228.802†	762.6	0.02350	mg/L	0.001315	0.1175	mg/L	0.00658	5.60%
Co 228.616†	1391.5	0.03348	mg/L	0.001746	0.1674	mg/L	0.00873	5.21%
Cr 267.716†	754.7	0.1223	mg/L	0.00282	0.6113	mg/L	0.01411	2.31%
Cu 324.752†	26965.4	0.1065	mg/L	0.00612	0.5323	mg/L	0.03062	5.75%
Fe 273.955†	101980.9	77.78	mg/L	1.660	388.9	mg/L	8.30	2.13%
K 766.490†	22467.5	11.27	mg/L	0.250	56.36	mg/L	1.250	2.22%
Mg 279.077†	28079.3	19.00	mg/L	0.429	95.00	mg/L	2.143	2.26%
Mn 257.610†	118229.1	3.268	mg/L	0.0692	16.34	mg/L	0.346	2.12%
Mo 202.031†	61.0	0.00270	mg/L	0.000034	0.01351	mg/L	0.000171	1.27%
Na 589.592†	4716.6	0.3702	mg/L	0.00264	1.851	mg/L	0.0132	0.71%
Na 330.237†	-21.6	-0.5843	mg/L	0.18609	-2.921	mg/L	0.9304	31.85%
Ni 231.604†	286.5	0.06951	mg/L	0.000912	0.3476	mg/L	0.00456	1.31%
Pb 220.353†	6791.9	0.8591	mg/L	0.03922	4.296	mg/L	0.1961	4.57%
Sb 206.836†	21.3	0.00626	mg/L	0.002138	0.03130	mg/L	0.010690	34.15%
Se 196.026†	-3.2	-0.00221	mg/L	0.005312	-0.01107	mg/L	0.026561	239.92%
Si 288.158†	4886.3	2.273	mg/L	0.0381	11.36	mg/L	0.191	1.68%
Sn 189.927†	-40.0	-0.00609	mg/L	0.001001	-0.03046	mg/L	0.005003	16.42%
Sr 421.552†	275381.6	0.2940	mg/L	0.00631	1.470	mg/L	0.0315	2.15%
Ti 334.903†	52821.4	2.533	mg/L	0.0536	12.67	mg/L	0.268	2.12%
Tl 190.801†	-12.0	0.00291	mg/L	0.000928	0.01457	mg/L	0.004642	31.87%
V 292.402†	16419.7	0.1223	mg/L	0.00711	0.6113	mg/L	0.03557	5.82%
Zn 206.200†	5032.5	1.241	mg/L	0.0221	6.207	mg/L	0.1107	1.78%

Sequence No.: 8
Sample ID: VR33 L SWC

Autosampler Location: 361
Date Collected: 11/16/2012 3:55:11 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VR33 L SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR33 L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2333450.9	103.4	%	0.68				0.66%
ScR 361.383	301151.0	105.3	%	0.99				0.94%
Ag 328.068†	-156.1	-0.00085	mg/L	0.000101	-0.00424	mg/L	0.000505	11.92%
Al 308.215†	121696.2	68.33	mg/L	0.078	341.6	mg/L	0.39	0.11%
As 188.979†	-56.7	0.04785	mg/L	0.001275	0.2393	mg/L	0.00637	2.66%
B 249.677†	62.8	0.00792	mg/L	0.000132	0.03959	mg/L	0.000661	1.67%
Ba 233.527†	3187.7	0.6888	mg/L	0.00780	3.444	mg/L	0.0390	1.13%
Be 313.042†	1500.6	0.00220	mg/L	0.000035	0.01099	mg/L	0.000173	1.57%
Ca 317.933†	278715.6	19.62	mg/L	0.064	98.11	mg/L	0.319	0.33%
Cd 228.802†	364.8	0.01097	mg/L	0.000258	0.05486	mg/L	0.001292	2.35%
Co 228.616†	1645.8	0.04017	mg/L	0.000337	0.2008	mg/L	0.00168	0.84%
Cr 267.716†	575.2	0.09391	mg/L	0.001709	0.4695	mg/L	0.00855	1.82%
Cu 324.752†	22920.8	0.09118	mg/L	0.001056	0.4559	mg/L	0.00528	1.16%
Fe 273.955†	111187.4	84.80	mg/L	0.246	424.0	mg/L	1.23	0.29%
K 766.490†	21653.7	10.86	mg/L	0.044	54.32	mg/L	0.219	0.40%
Mg 279.077†	25440.5	17.21	mg/L	0.062	86.04	mg/L	0.312	0.36%
Mn 257.610†	119921.8	3.315	mg/L	0.0100	16.57	mg/L	0.050	0.30%
Mo 202.031†	46.2	0.00209	mg/L	0.000227	0.01043	mg/L	0.001133	10.87%
Na 589.592†	5131.9	0.4028	mg/L	0.00348	2.014	mg/L	0.0174	0.86%
Na 330.237†	-7.3	0.1489	mg/L	0.21807	0.7447	mg/L	1.09037	146.42%
Ni 231.604†	324.2	0.07868	mg/L	0.000664	0.3934	mg/L	0.00332	0.84%
Pb 220.353†	3113.0	0.4020	mg/L	0.00284	2.010	mg/L	0.0142	0.71%
Sb 206.836†	11.5	0.00378	mg/L	0.000699	0.01891	mg/L	0.003495	18.48%
Se 196.026†	10.4	0.00691	mg/L	0.004327	0.03457	mg/L	0.021635	62.59%
Si 288.158†	2642.5	1.230	mg/L	0.0155	6.150	mg/L	0.0773	1.26%
Sn 189.927†	-32.1	-0.00540	mg/L	0.000445	-0.02699	mg/L	0.002224	8.24%
Sr 421.552†	203421.9	0.2172	mg/L	0.00039	1.086	mg/L	0.0019	0.18%
Ti 334.903†	57600.0	2.763	mg/L	0.0042	13.81	mg/L	0.021	0.15%
Tl 190.801†	-12.3	0.00356	mg/L	0.000909	0.01780	mg/L	0.004547	25.54%
V 292.402†	16139.8	0.1196	mg/L	0.00135	0.5981	mg/L	0.00676	1.13%
Zn 206.200†	2782.1	0.6863	mg/L	0.00436	3.431	mg/L	0.0218	0.64%

Sequence No.: 9
Sample ID: CV 12

Autosampler Location: 7
Date Collected: 11/16/2012 3:59:13 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2262093.8	100.2	%	0.82				0.82%
ScR 361.383	285242.5	99.76	%	1.277				1.28%
Ag 328.068†	177297.2	1.004	mg/L	0.0098	1.004	mg/L	0.0098	0.97%
Al 308.215†	3668.7	2.026	mg/L	0.0246	2.026	mg/L	0.0246	1.21%
As 188.979†	3684.8	1.976	mg/L	0.0171	1.976	mg/L	0.0171	0.87%
B 249.677†	7560.6	0.9640	mg/L	0.01304	0.9640	mg/L	0.01304	1.35%
Ba 233.527†	4615.8	1.017	mg/L	0.0115	1.017	mg/L	0.0115	1.13%
Be 313.042†	636663.6	0.9571	mg/L	0.00725	0.9571	mg/L	0.00725	0.76%
Ca 317.933†	27619.3	1.944	mg/L	0.0144	1.944	mg/L	0.0144	0.74%
Cd 228.802†	33158.4	1.034	mg/L	0.0104	1.034	mg/L	0.0104	1.01%
Co 228.616†	35694.3	1.010	mg/L	0.0112	1.010	mg/L	0.0112	1.11%
Cr 267.716†	6396.4	1.029	mg/L	0.0126	1.029	mg/L	0.0126	1.22%
Cu 324.752†	260252.9	1.000	mg/L	0.0065	1.000	mg/L	0.0065	0.65%
Fe 273.955†	2748.6	2.089	mg/L	0.0251	2.089	mg/L	0.0251	1.20%
K 766.490†	39776.0	19.96	mg/L	0.149	19.96	mg/L	0.149	0.75%
Mg 279.077†	2975.6	2.025	mg/L	0.0201	2.025	mg/L	0.0201	0.99%
Mn 257.610†	36379.6	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.75%
Mo 202.031†	20104.7	1.002	mg/L	0.0099	1.002	mg/L	0.0099	0.99%
Na 589.592†	624041.4	48.98	mg/L	0.485	48.98	mg/L	0.485	0.99%
Na 330.237†	1496.6	51.99	mg/L	0.360	51.99	mg/L	0.360	0.69%
Ni 231.604†	3988.9	0.9682	mg/L	0.01173	0.9682	mg/L	0.01173	1.21%
Pb 220.353†	15597.9	1.950	mg/L	0.0203	1.950	mg/L	0.0203	1.04%
Sb 206.836†	6980.2	2.134	mg/L	0.0238	2.134	mg/L	0.0238	1.12%
Se 196.026†	2898.1	1.945	mg/L	0.0180	1.945	mg/L	0.0180	0.92%
Si 288.158†	4489.2	2.085	mg/L	0.0323	2.085	mg/L	0.0323	1.55%
Sn 189.927†	3986.1	1.024	mg/L	0.0100	1.024	mg/L	0.0100	0.97%
Sr 421.552†	897083.4	0.9577	mg/L	0.00869	0.9577	mg/L	0.00869	0.91%
Ti 334.903†	21320.0	1.022	mg/L	0.0097	1.022	mg/L	0.0097	0.95%
Tl 190.801†	4971.3	1.936	mg/L	0.0198	1.936	mg/L	0.0198	1.02%
V 292.402†	133567.7	1.024	mg/L	0.0098	1.024	mg/L	0.0098	0.96%
Zn 206.200†	4041.0	0.9966	mg/L	0.01025	0.9966	mg/L	0.01025	1.03%

Sequence No.: 10
Sample ID: CB 12

Autosampler Location: 1
Date Collected: 11/16/2012 4:04:19 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2269012.6	100.5	%	0.64				0.63%
ScR 361.383	292450.1	102.3	%	2.50				2.44%
Ag 328.068†	76.3	0.00043	mg/L	0.000049	0.00043	mg/L	0.000049	11.33%
Al 308.215†	17.0	0.00956	mg/L	0.004765	0.00956	mg/L	0.004765	49.86%
As 188.979†	0.4	0.00024	mg/L	0.000464	0.00024	mg/L	0.000464	196.09%
B 249.677†	7.6	0.00097	mg/L	0.001303	0.00097	mg/L	0.001303	134.09%
Ba 233.527†	-5.0	-0.00109	mg/L	0.000741	-0.00109	mg/L	0.000741	67.67%
Be 313.042†	92.8	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.52%
Ca 317.933†	49.0	0.00345	mg/L	0.001132	0.00345	mg/L	0.001132	32.82%
Cd 228.802†	-11.4	-0.00036	mg/L	0.000146	-0.00036	mg/L	0.000146	40.24%
Co 228.616†	-6.2	-0.00018	mg/L	0.000030	-0.00018	mg/L	0.000030	16.80%
Cr 267.716†	-3.9	-0.00062	mg/L	0.000888	-0.00062	mg/L	0.000888	142.32%
Cu 324.752†	-45.1	-0.00017	mg/L	0.000129	-0.00017	mg/L	0.000129	74.17%
Fe 273.955†	16.8	0.01280	mg/L	0.004378	0.01280	mg/L	0.004378	34.22%
K 766.490†	7.0	0.00350	mg/L	0.008391	0.00350	mg/L	0.008391	239.82%
Mg 279.077†	-2.5	-0.00169	mg/L	0.004610	-0.00169	mg/L	0.004610	273.27%
Mn 257.610†	4.0	0.00011	mg/L	0.000060	0.00011	mg/L	0.000060	54.98%
Mo 202.031†	15.6	0.00078	mg/L	0.000076	0.00078	mg/L	0.000076	9.77%
Na 589.592†	94.2	0.00739	mg/L	0.003626	0.00739	mg/L	0.003626	49.04%
Na 330.237†	1.4	0.04796	mg/L	0.404095	0.04796	mg/L	0.404095	842.57%
Ni 231.604†	-1.9	-0.00046	mg/L	0.000628	-0.00046	mg/L	0.000628	135.18%
Pb 220.353†	0.0	0.00000	mg/L	0.000855	0.00000	mg/L	0.000855	>999.9%
Sb 206.836†	7.3	0.00224	mg/L	0.001437	0.00224	mg/L	0.001437	64.09%
Se 196.026†	3.5	0.00236	mg/L	0.002542	0.00236	mg/L	0.002542	107.52%
Si 288.158†	8.1	0.00377	mg/L	0.006244	0.00377	mg/L	0.006244	165.58%
Sn 189.927†	-0.8	-0.00021	mg/L	0.000097	-0.00021	mg/L	0.000097	45.84%
Sr 421.552†	159.9	0.00017	mg/L	0.000035	0.00017	mg/L	0.000035	20.75%
Ti 334.903†	16.7	0.00080	mg/L	0.000917	0.00080	mg/L	0.000917	114.24%
Tl 190.801†	5.9	0.00231	mg/L	0.000739	0.00231	mg/L	0.000739	31.93%
V 292.402†	-37.1	-0.00029	mg/L	0.000090	-0.00029	mg/L	0.000090	31.40%
Zn 206.200†	-1.2	-0.00031	mg/L	0.000290	-0.00031	mg/L	0.000290	94.22%

Sequence No.: 11
Sample ID: CRI

Autosampler Location: 301
Date Collected: 11/16/2012 4:08:35 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2284761.1	101.2	%	1.22				1.21%
ScR 361.383	290090.7	101.5	%	1.08				1.06%
Ag 328.068†	564.4	0.00319	mg/L	0.000242	0.00319	mg/L	0.000242	7.58%
Al 308.215†	108.6	0.06085	mg/L	0.006318	0.06085	mg/L	0.006318	10.38%
As 188.979†	88.6	0.04707	mg/L	0.002570	0.04707	mg/L	0.002570	5.46%
B 249.677†	156.9	0.02002	mg/L	0.001066	0.02002	mg/L	0.001066	5.33%
Ba 233.527†	10.5	0.00229	mg/L	0.000113	0.00229	mg/L	0.000113	4.94%
Be 313.042†	667.0	0.00100	mg/L	0.000015	0.00100	mg/L	0.000015	1.49%
Ca 317.933†	728.3	0.05128	mg/L	0.000186	0.05128	mg/L	0.000186	0.36%
Cd 228.802†	59.4	0.00157	mg/L	0.000146	0.00157	mg/L	0.000146	9.30%
Co 228.616†	112.6	0.00318	mg/L	0.000055	0.00318	mg/L	0.000055	1.74%
Cr 267.716†	28.0	0.00450	mg/L	0.001876	0.00450	mg/L	0.001876	41.70%
Cu 324.752†	447.8	0.00172	mg/L	0.000099	0.00172	mg/L	0.000099	5.74%
Fe 273.955†	82.4	0.06283	mg/L	0.002076	0.06283	mg/L	0.002076	3.30%
K 766.490†	994.1	0.4988	mg/L	0.01164	0.4988	mg/L	0.01164	2.33%
Mg 279.077†	76.6	0.05193	mg/L	0.000896	0.05193	mg/L	0.000896	1.73%
Mn 257.610†	33.1	0.00092	mg/L	0.000068	0.00092	mg/L	0.000068	7.42%
Mo 202.031†	99.2	0.00494	mg/L	0.000109	0.00494	mg/L	0.000109	2.21%
Na 589.592†	5937.4	0.4660	mg/L	0.00283	0.4660	mg/L	0.00283	0.61%
Na 330.237†	18.7	0.6502	mg/L	0.31375	0.6502	mg/L	0.31375	48.26%
Ni 231.604†	35.6	0.00864	mg/L	0.000914	0.00864	mg/L	0.000914	10.58%
Pb 220.353†	167.3	0.02093	mg/L	0.000542	0.02093	mg/L	0.000542	2.59%
Sb 206.836†	168.6	0.05160	mg/L	0.000157	0.05160	mg/L	0.000157	0.30%
Se 196.026†	80.6	0.05412	mg/L	0.003062	0.05412	mg/L	0.003062	5.66%
Si 288.158†	142.0	0.06596	mg/L	0.003587	0.06596	mg/L	0.003587	5.44%
Sn 189.927†	34.2	0.00882	mg/L	0.000799	0.00882	mg/L	0.000799	9.06%
Sr 421.552†	966.0	0.00103	mg/L	0.000014	0.00103	mg/L	0.000014	1.38%
Ti 334.903†	126.7	0.00607	mg/L	0.000925	0.00607	mg/L	0.000925	15.23%
Tl 190.801†	122.5	0.04789	mg/L	0.000959	0.04789	mg/L	0.000959	2.00%
V 292.402†	362.3	0.00278	mg/L	0.000143	0.00278	mg/L	0.000143	5.13%
Zn 206.200†	35.5	0.00874	mg/L	0.000417	0.00874	mg/L	0.000417	4.77%

Sequence No.: 12
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 11/16/2012 4:12:52 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2238641.2	99.18	%	0.196				0.20%
ScR 361.383	283194.8	99.04	%	0.662				0.67%
Ag 328.068†	-159.0	-0.00090	mg/L	0.000206	-0.00090	mg/L	0.000206	22.98%
Al 308.215†	352569.5	198.0	mg/L	2.30	198.0	mg/L	2.30	1.16%
As 188.979†	41.5	0.01641	mg/L	0.002915	0.01641	mg/L	0.002915	17.76%
B 249.677†	-27.9	-0.00356	mg/L	0.001822	-0.00356	mg/L	0.001822	51.13%
Ba 233.527†	133.7	-0.00288	mg/L	0.000472	-0.00288	mg/L	0.000472	16.39%
Be 313.042†	111.8	0.00017	mg/L	0.000011	0.00017	mg/L	0.000011	6.83%
Ca 317.933†	1405409.6	98.95	mg/L	1.308	98.95	mg/L	1.308	1.32%
Cd 228.802†	45.6	-0.00059	mg/L	0.000181	-0.00059	mg/L	0.000181	30.80%
Co 228.616†	60.9	-0.00086	mg/L	0.000267	-0.00086	mg/L	0.000267	31.08%
Cr 267.716†	1.1	-0.00149	mg/L	0.000999	-0.00149	mg/L	0.000999	67.01%
Cu 324.752†	-2154.8	-0.00038	mg/L	0.000096	-0.00038	mg/L	0.000096	25.22%
Fe 273.955†	259131.0	197.6	mg/L	2.30	197.6	mg/L	2.30	1.17%
K 766.490†	-15.8	-0.00792	mg/L	0.009741	-0.00792	mg/L	0.009741	123.06%
Mg 279.077†	145616.7	98.64	mg/L	1.242	98.64	mg/L	1.242	1.26%
Mn 257.610†	24.6	0.00067	mg/L	0.000237	0.00067	mg/L	0.000237	35.68%
Mo 202.031†	44.4	0.00114	mg/L	0.000093	0.00114	mg/L	0.000093	8.18%
Na 589.592†	163.7	0.01285	mg/L	0.002347	0.01285	mg/L	0.002347	18.27%
Na 330.237†	-9.6	-0.3338	mg/L	0.22885	-0.3338	mg/L	0.22885	68.57%
Ni 231.604†	-0.1	-0.00001	mg/L	0.000948	-0.00001	mg/L	0.000948	>999.9%
Pb 220.353†	-292.9	0.00265	mg/L	0.000949	0.00265	mg/L	0.000949	35.86%
Sb 206.836†	14.0	0.00415	mg/L	0.002753	0.00415	mg/L	0.002753	66.27%
Se 196.026†	21.3	0.01432	mg/L	0.001654	0.01432	mg/L	0.001654	11.55%
Si 288.158†	-24.0	0.00081	mg/L	0.004498	0.00081	mg/L	0.004498	558.64%
Sn 189.927†	-76.7	-0.00743	mg/L	0.001517	-0.00743	mg/L	0.001517	20.41%
Sr 421.552†	3674.6	0.00392	mg/L	0.000008	0.00392	mg/L	0.000008	0.21%
Ti 334.903†	147.9	0.00237	mg/L	0.000181	0.00237	mg/L	0.000181	7.64%
Tl 190.801†	-52.9	0.00040	mg/L	0.003526	0.00040	mg/L	0.003526	879.94%
V 292.402†	1463.6	0.00427	mg/L	0.000173	0.00427	mg/L	0.000173	4.05%
Zn 206.200†	7.7	0.00191	mg/L	0.000698	0.00191	mg/L	0.000698	36.59%

Sequence No.: 13
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 11/16/2012 4:17:09 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2238392.5	99.17	%	1.003				1.01%
ScR 361.383	283102.7	99.01	%	1.472				1.49%
Ag 328.068†	173829.6	0.9840	mg/L	0.00766	0.9840	mg/L	0.00766	0.78%
Al 308.215†	350678.6	196.9	mg/L	3.60	196.9	mg/L	3.60	1.83%
As 188.979†	1907.4	1.003	mg/L	0.0150	1.003	mg/L	0.0150	1.49%
B 249.677†	-10.8	-0.00340	mg/L	0.000656	-0.00340	mg/L	0.000656	19.31%
Ba 233.527†	4776.9	1.020	mg/L	0.0199	1.020	mg/L	0.0199	1.95%
Be 313.042†	645690.1	0.9707	mg/L	0.01808	0.9707	mg/L	0.01808	1.86%
Ca 317.933†	1417527.9	99.80	mg/L	1.888	99.80	mg/L	1.888	1.89%
Cd 228.802†	33126.2	1.038	mg/L	0.0069	1.038	mg/L	0.0069	0.66%
Co 228.616†	34667.0	0.9804	mg/L	0.00623	0.9804	mg/L	0.00623	0.63%
Cr 267.716†	6468.8	1.039	mg/L	0.0176	1.039	mg/L	0.0176	1.69%
Cu 324.752†	265360.5	1.029	mg/L	0.0077	1.029	mg/L	0.0077	0.74%
Fe 273.955†	261260.6	199.3	mg/L	4.32	199.3	mg/L	4.32	2.17%
K 766.490†	-95.8	-0.04804	mg/L	0.017775	-0.04804	mg/L	0.017775	37.00%
Mg 279.077†	146511.1	99.25	mg/L	2.013	99.25	mg/L	2.013	2.03%
Mn 257.610†	35908.9	0.9927	mg/L	0.01982	0.9927	mg/L	0.01982	2.00%
Mo 202.031†	44.2	0.00107	mg/L	0.000306	0.00107	mg/L	0.000306	28.69%
Na 589.592†	297.6	0.02336	mg/L	0.001574	0.02336	mg/L	0.001574	6.74%
Na 330.237†	-0.7	-0.3352	mg/L	0.17063	-0.3352	mg/L	0.17063	50.90%
Ni 231.604†	3934.8	0.9549	mg/L	0.01739	0.9549	mg/L	0.01739	1.82%
Pb 220.353†	7540.9	0.9820	mg/L	0.01102	0.9820	mg/L	0.01102	1.12%
Sb 206.836†	3412.6	1.032	mg/L	0.0097	1.032	mg/L	0.0097	0.94%
Se 196.026†	1487.5	0.9980	mg/L	0.00594	0.9980	mg/L	0.00594	0.60%
Si 288.158†	-27.4	0.00302	mg/L	0.005149	0.00302	mg/L	0.005149	170.21%
Sn 189.927†	-76.7	-0.00684	mg/L	0.000857	-0.00684	mg/L	0.000857	12.53%
Sr 421.552†	3680.7	0.00393	mg/L	0.000075	0.00393	mg/L	0.000075	1.91%
Ti 334.903†	138.0	0.00165	mg/L	0.000474	0.00165	mg/L	0.000474	28.75%
Tl 190.801†	2324.1	0.9211	mg/L	0.00879	0.9211	mg/L	0.00879	0.95%
V 292.402†	129241.3	0.9845	mg/L	0.00692	0.9845	mg/L	0.00692	0.70%
Zn 206.200†	3846.6	0.9488	mg/L	0.01871	0.9488	mg/L	0.01871	1.97%

Sequence No.: 14
Sample ID: CV 13

Autosampler Location: 7
Date Collected: 11/16/2012 4:20:59 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2273298.0	100.7	%	0.34				0.34%
ScR 361.383	290143.1	101.5	%	0.56				0.55%
Ag 328.068†	171234.4	0.9693	mg/L	0.00454	0.9693	mg/L	0.00454	0.47%
Al 308.215†	3659.6	2.020	mg/L	0.0114	2.020	mg/L	0.0114	0.56%
As 188.979†	3663.5	1.965	mg/L	0.0035	1.965	mg/L	0.0035	0.18%
B 249.677†	7389.3	0.9421	mg/L	0.00212	0.9421	mg/L	0.00212	0.22%
Ba 233.527†	4560.8	1.005	mg/L	0.0076	1.005	mg/L	0.0076	0.76%
Be 313.042†	632518.6	0.9509	mg/L	0.00784	0.9509	mg/L	0.00784	0.82%
Ca 317.933†	29116.4	2.050	mg/L	0.0058	2.050	mg/L	0.0058	0.28%
Cd 228.802†	33218.1	1.036	mg/L	0.0062	1.036	mg/L	0.0062	0.59%
Co 228.616†	35894.8	1.016	mg/L	0.0052	1.016	mg/L	0.0052	0.51%
Cr 267.716†	6304.6	1.014	mg/L	0.0027	1.014	mg/L	0.0027	0.27%
Cu 324.752†	260382.7	1.001	mg/L	0.0034	1.001	mg/L	0.0034	0.34%
Fe 273.955†	2776.6	2.111	mg/L	0.0091	2.111	mg/L	0.0091	0.43%
K 766.490†	39289.2	19.71	mg/L	0.165	19.71	mg/L	0.165	0.84%
Mg 279.077†	2962.0	2.016	mg/L	0.0208	2.016	mg/L	0.0208	1.03%
Mn 257.610†	37207.2	1.029	mg/L	0.0037	1.029	mg/L	0.0037	0.36%
Mo 202.031†	20592.5	1.026	mg/L	0.0016	1.026	mg/L	0.0016	0.16%
Na 589.592†	612762.1	48.09	mg/L	0.373	48.09	mg/L	0.373	0.78%
Na 330.237†	1462.7	50.81	mg/L	0.102	50.81	mg/L	0.102	0.20%
Ni 231.604†	3945.6	0.9577	mg/L	0.00464	0.9577	mg/L	0.00464	0.48%
Pb 220.353†	16062.0	2.008	mg/L	0.0011	2.008	mg/L	0.0011	0.05%
Sb 206.836†	6924.2	2.117	mg/L	0.0037	2.117	mg/L	0.0037	0.17%
Se 196.026†	2896.0	1.944	mg/L	0.0036	1.944	mg/L	0.0036	0.19%
Si 288.158†	4408.7	2.048	mg/L	0.0062	2.048	mg/L	0.0062	0.30%
Sn 189.927†	3962.6	1.018	mg/L	0.0003	1.018	mg/L	0.0003	0.03%
Sr 421.552†	883120.3	0.9427	mg/L	0.00680	0.9427	mg/L	0.00680	0.72%
Ti 334.903†	21769.8	1.043	mg/L	0.0036	1.043	mg/L	0.0036	0.34%
Tl 190.801†	4948.9	1.927	mg/L	0.0042	1.927	mg/L	0.0042	0.22%
V 292.402†	131171.1	1.006	mg/L	0.0054	1.006	mg/L	0.0054	0.53%
Zn 206.200†	4039.0	0.9961	mg/L	0.00469	0.9961	mg/L	0.00469	0.47%

Sequence No.: 15
Sample ID: CB 13
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 11/16/2012 4:25:06 PM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2286126.7	101.3	%	0.90				0.89%
ScR 361.383	289664.1	101.3	%	0.89				0.88%
Ag 328.068†	54.9	0.00031	mg/L	0.000128	0.00031	mg/L	0.000128	41.13%
Al 308.215†	50.1	0.02811	mg/L	0.005220	0.02811	mg/L	0.005220	18.57%
As 188.979†	-2.6	-0.00138	mg/L	0.001374	-0.00138	mg/L	0.001374	99.35%
B 249.677†	5.9	0.00076	mg/L	0.000758	0.00076	mg/L	0.000758	99.99%
Ba 233.527†	-0.7	-0.00015	mg/L	0.000249	-0.00015	mg/L	0.000249	162.68%
Be 313.042†	157.5	0.00024	mg/L	0.000019	0.00024	mg/L	0.000019	7.95%
Ca 317.933†	200.6	0.01412	mg/L	0.000526	0.01412	mg/L	0.000526	3.73%
Cd 228.802†	-10.7	-0.00033	mg/L	0.000041	-0.00033	mg/L	0.000041	12.45%
Co 228.616†	-4.0	-0.00011	mg/L	0.000132	-0.00011	mg/L	0.000132	115.31%
Cr 267.716†	-11.6	-0.00187	mg/L	0.000890	-0.00187	mg/L	0.000890	47.61%
Cu 324.752†	-39.6	-0.00015	mg/L	0.000090	-0.00015	mg/L	0.000090	59.60%
Fe 273.955†	40.4	0.03079	mg/L	0.003013	0.03079	mg/L	0.003013	9.78%
K 766.490†	32.0	0.01605	mg/L	0.019384	0.01605	mg/L	0.019384	120.81%
Mg 279.077†	21.5	0.01459	mg/L	0.004491	0.01459	mg/L	0.004491	30.78%
Mn 257.610†	3.3	0.00009	mg/L	0.000053	0.00009	mg/L	0.000053	57.61%
Mo 202.031†	12.2	0.00061	mg/L	0.000185	0.00061	mg/L	0.000185	30.43%
Na 589.592†	67.8	0.00532	mg/L	0.003612	0.00532	mg/L	0.003612	67.90%
Na 330.237†	-7.2	-0.2497	mg/L	0.79464	-0.2497	mg/L	0.79464	318.28%
Ni 231.604†	-2.5	-0.00060	mg/L	0.001044	-0.00060	mg/L	0.001044	174.55%
Pb 220.353†	10.9	0.00136	mg/L	0.000588	0.00136	mg/L	0.000588	43.17%
Sb 206.836†	9.9	0.00305	mg/L	0.001565	0.00305	mg/L	0.001565	51.35%
Se 196.026†	1.3	0.00088	mg/L	0.002604	0.00088	mg/L	0.002604	294.65%
Si 288.158†	6.0	0.00278	mg/L	0.005514	0.00278	mg/L	0.005514	198.12%
Sn 189.927†	-2.5	-0.00065	mg/L	0.000578	-0.00065	mg/L	0.000578	89.03%
Sr 421.552†	186.5	0.00020	mg/L	0.000030	0.00020	mg/L	0.000030	15.15%
Ti 334.903†	4.3	0.00021	mg/L	0.000738	0.00021	mg/L	0.000738	355.74%
Tl 190.801†	4.0	0.00156	mg/L	0.000202	0.00156	mg/L	0.000202	12.96%
V 292.402†	-3.6	-0.00004	mg/L	0.000067	-0.00004	mg/L	0.000067	183.92%
Zn 206.200†	-1.0	-0.00025	mg/L	0.000543	-0.00025	mg/L	0.000543	215.90%

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 1 **of** 7

All corrections made by analyst unless otherwise noted. 11.15.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
Z		ZZZZZZ			~~2926-7~~
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{53}Cr, ^{67}Zn high
		LR200			
		LR300			Ag low
		B1			
		B2			
		B3			
		CCV2			Mo low
		CCB2			
		VR31 MB1	SWN	20	
		1 MB1SPK	1	1	✓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 2 of 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR31 A-L	SWN	100	~~rr Mn, Ba (500x)~~
		A		20	~~rr Mn, Ba 100x~~ (CAF)
		ADUP			Ni high RPD
		ASPK			Sb low %R
		APOST			0.06mL PMS spk #2 (1/10) Sb 0.06mL PMS spk #1 (1/10)
		C			~~rr Mn, Ba 100x~~
		D			~~rr Mn 100x~~
		E			~~rr Mn, Ba 100x~~
		CCV3			
		CCB3			
		VR31 J	SWN	20	~~rr Mn 100x~~
		F			
		H			
		K		100	~~Mn~~ Pb Zn
		K		20	
		L			~~rr Mn 100x~~
		I			
		G			
		B		400	~~Mn Ba~~ Zn
		B		20	
		CCV4			
		CCB4			
		VR30 MB1	SWN	20	
		MB1SPK			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 3 of 7

All corrections made by analyst unless otherwise noted. 11.16.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 A-L	SWN	100 ✓	~~rr 1000x~~
		A		20	~~rr Mn, Ba 200x~~ (CAF)
		ADUP		✓	↓
		ASPK			PbSTR; Sb low % R ~~rr Mn, Ba 200x~~
		APOST			Sb
		B			
		C			
		D			
		CCV5			
		CCB5			
		VR32 MB1	SWN	20	rr Be
		↓ MB1SPK		✓	
		VR30 E			
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV6			Be high, Mo low
		CCB6			As2 high
		STD O			
		CCV7			Be high · Ag, Mo low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 4 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB7			
		VR32 A-L	SWN	100	rr Be, Ag V = 11.31.
		A		20	CAF
		ADUP		↓	
		ASPK			Zn Sb low/R
		APOST			0.06mL PMSspk#1 '/20 0.06mL PMSspk#2 '/20 Sb; Zn
		B			rr Be, Ag
		C			
		D			
		E			; rr V, Cr, Co (Sc high)
		F			
		CCV8			Be high, Ag low
		CCB8			
		VR33 MBI	SWN	20	rr Be, Ag
		MBISPK			
		VR32 G			
		H			
		I			
		J			
		K			
		L			rr V, Cr, Co (Sc high) rr Pb Zn (100x)
		VR33 B			
		C			rr V, Cr, Co (Sc high) rr Pb, Zn
		CCV9			Mo, Ag low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 5 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB9			
		VR33 A-L	SWN	100	(300x) (500x) rr Ag, Pb, Zn Cd=10.4 L.
		A		20	CAF
		ADUP			N: high RPD
		ASPK			Sb low % R
		APOST			Sb 0.06mL PMS spk #1 4/10 0.06mL PMS spk #2 4/10
		D			rr Ag
		E			rr Ag, Zn
		F			rr Ag
		G			
		H			
		CCV10			Mo, Ag low
		CCB10			
		VR34 MB1	SWN	20	rr Ag, Be
		MB1SPK			
		VR33 I			
		J			rr Zn, Pb 100x
		K			rr Zn 100x
		L			
		VR34 B			rr Pb (100x)
		C			
		D			rr Pb, Zn 100x
		E			
		CCV11			Be high; Mo, Ag low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 6 **of** 7

All corrections made by analyst unless otherwise noted. 11.19.12 MJJ

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB11			
		VR34 A-L	SWN	100	rr Ag, Be, Pb, Zn Cd = 10.6 ug/L
		A		20	rr Ag, Be rr Zn Pb (100x) (CAF)
		ADUP			
		ASPK			Sb low ug/L R
		APOST			Sb 0.06mL PMSspk#1 1/10 0.06mL PMSspk#2 1/10
		F			rr Ag, Be (20x); rr Pb Zn 100x
		G			
		H			; rr Zn 100x
		I			rr Pb Zn 100x
		J			
		CCV12			Mo, Ag low
		CCB12			
		VR73 MB1	REN	2	rr Ag
		MB1SPK			
		A			rr Mn Zn 1/20
		B			
		C			rr Mn 1/20
		D			
		F			
		H			
		VR34 K	SWN	20	rr Zn, Pb 1/100
		L			
		CCV13			Mo, Ag Low

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.15.12 **Analyst:** MJJ **Page:** 7 **of** 7

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB13			End PKG
		VS39 MB	REN	2	
		VS26 MB			
		↓ MBSPK		✓	
		VS39 MBSPK		✓	
		↓ A			
		VS26 A			
		B			
		C			
		D			
		E			
		CCV14			Mo, Ag low
		CCB14			
		VR73 MB2	REN	2	rr Ag Cu 0.756 ppb (CAF)
		MB3			
		MB4			
		MB4SPK		✓	
		MB3SPK		✓	
		MB2SPK		✓	
		J			
		L			
		M			
		N			11.29.12
		CCV15			Mo, Ag low
		CCB15			Th high
		Rinse / DI			

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, November 15, 2012 11:25:14
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1275
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3053.4	3053.360	71.071	2.3	Standard
	Mg	24.0	29322.9	29322.904	322.760	1.1	Standard
	In	114.9	78650.2	78650.220	497.933	0.6	Standard
	Pb	208.0	34955.6	34955.628	120.271	0.3	Standard
	U	238.1	61022.0	61022.015	440.425	0.7	Standard
⌈	CeO	155.9	1000.7	0.013	0.000	3.8	Standard
| >	Ce	139.9	76266.2	76266.222	634.937	0.8	Standard
⌊	Ce++	70.0	657.5	0.009	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

)timization Summary

iartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 11/15/2012 11:25:12 AM
id Time: 11/15/2012 11:27:47 AM

ıily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3053.36
Obtained Intensity (Mg 23.985): 29322.90
Obtained Intensity (In 114.904): 78650.22
Obtained Intensity (Pb 207.977): 34955.63
Obtained Intensity (U 238.05): 61022.02
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.013 (=1000.66 / 76266.22)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=657.49 / 76266.22)

SmartTune Wizard - Summary

ptimization Summary

nartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:17:32 AM
nd Time: 11/15/2012 11:19:44 AM

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.708)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.718)

SmartTune Wizard - Summary

ptimization Summary

nartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/15/2012 11:20:57 AM
ıd Time: 11/15/2012 11:25:08 AM

ıtoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 11:59:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				726304	0
⌊	Be	9		ug/L				5	53
	C	13		ug/L				58801	3
	Cl	37		ug/L				3025336	4
⌈>	Sc	45		ug/L				671354	1
|	V	51		ug/L				5156	3
|	V-1	51		ug/L				130	18
|	Cr	52		ug/L				15247	2
|	Cr	53		ug/L				115	5
|	Mn	55		ug/L				250	8
⌊	Co	59		ug/L				40	11
⌈>	Ge	72		ug/L				457613	0
|	Ni	60		ug/L				22	30
|	Ni	62		ug/L				29	10
|	Cu	63		ug/L				58	22
|	Cu	65		ug/L				28	19
|	Zn	66		ug/L				143	10
|	Zn	67		ug/L				23	23
|	Zn	68		ug/L				137	9
|	As	75		ug/L				267	5
|	As-1	75		ug/L				8149	1
|	Se	82		ug/L				-5	14
|	Se	78		ug/L				8278	1
⌊	Mo	98		ug/L				17	21
	Y	89		ug/L				298590	2
	Kr	83		ug/L				554	4
⌈>	In	115		ug/L				979916	1
|	Ag	107		ug/L				15	17
|	Cd	111		ug/L				63	6
|	Cd	114		ug/L				30	9
|	Sb	121		ug/L				102	39
|	Sb	123		ug/L				72	14
|	Ba	135		ug/L				11	13
⌊	Ba	137		ug/L				17	10
⌈>	Tb	159		ug/L				1160798	1
|	Tl	205		ug/L				51	19
|	Pb	208		ug/L				139	3
|	Bi	209		ug/L				2367270	0
|	Th	232		ug/L				21	59
⌊	U	238		ug/L				3	41

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:03:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	721999	0
	Be	9	0.200	ug/L	0.008	4	5	500	4
	C	13		ug/L			58801	61004	4
	Cl	37		ug/L			3025336	2900221	1
>	Sc	45		ug/L			671354	664677	2
	V	51	0.200	ug/L	0.030	14	5156	8058	3
	V-1	51	0.200	ug/L	0.013	6	130	2979	4
	Cr	52	0.500	ug/L	0.070	13	15247	21420	2
	Cr	53	0.500	ug/L	0.016	3	115	796	3
	Mn	55	0.500	ug/L	0.009	1	250	8460	2
	Co	59	0.200	ug/L	0.008	3	40	2660	0
>	Ge	72		ug/L			457613	458359	0
	Ni	60	0.500	ug/L	0.006	1	22	1424	1
	Ni	62	0.500	ug/L	0.031	6	29	219	5
	Cu	63	0.500	ug/L	0.003	0	58	3329	0
	Cu	65	0.500	ug/L	0.016	3	28	1508	2
	Zn	66	4.000	ug/L	0.074	1	143	7230	1
	Zn	67	4.000	ug/L	0.084	2	23	1119	2
	Zn	68	4.000	ug/L	0.105	2	137	5189	2
	As	75	0.200	ug/L	0.011	5	267	631	3
	As-1	75	0.200	ug/L	0.037	18	8149	8627	1
	Se	82	0.500	ug/L	0.027	5	-5	100	5
	Se	78	0.500	ug/L	0.090	17	8278	8635	1
	Mo	98	0.200	ug/L	0.006	2	17	886	2
	Y	89		ug/L			298590	302917	1
	Kr	83		ug/L			554	520	1
>	In	115		ug/L			979916	996805	0
	Ag	107	0.200	ug/L	0.001	0	15	3021	1
	Cd	111	0.100	ug/L	0.004	3	63	592	4
	Cd	114	0.100	ug/L	0.006	6	30	1237	6
	Sb	121	0.200	ug/L	0.006	2	102	3067	2
	Sb	123	0.200	ug/L	0.008	3	72	2282	3
	Ba	135	0.500	ug/L	0.004	0	11	2172	1
	Ba	137	0.500	ug/L	0.019	3	17	3761	3
>	Tb	159		ug/L			1160798	1148209	0
	Tl	205	0.200	ug/L	0.002	0	51	7419	0
	Pb	208	0.100	ug/L	0.001	0	139	5039	0
	Bi	209		ug/L			2367270	2396482	1
	Th	232	0.200	ug/L	0.003	1	21	8440	1
	U	238	0.200	ug/L	0.003	1	3	9178	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:07:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	716986	1
	Be	9	10.000	ug/L	0.111	1	5	23410	2
	C	13		ug/L			58801	59693	6
	Cl	37		ug/L			3025336	2984447	0
>	Sc	45		ug/L			671354	674326	1
	V	51	10.000	ug/L	0.329	3	5156	143597	4
	V-1	51	10.000	ug/L	0.247	2	130	139693	3
	Cr	52	9.998	ug/L	0.079	0	15247	135864	1
	Cr	53	10.000	ug/L	0.488	4	115	14104	3
	Mn	55	10.000	ug/L	0.102	1	250	167408	2
	Co	59	10.000	ug/L	0.402	4	40	131071	2
>	Ge	72		ug/L			457613	466494	1
	Ni	60	9.999	ug/L	0.357	3	22	27973	2
	Ni	62	10.001	ug/L	0.253	2	29	4073	1
	Cu	63	9.999	ug/L	0.466	4	58	64397	2
	Cu	65	9.999	ug/L	0.131	1	28	29424	0
	Zn	66	9.955	ug/L	0.279	2	143	17603	1
	Zn	67	10.070	ug/L	0.071	0	23	2958	2
	Zn	68	9.958	ug/L	0.281	2	137	12610	0
	As	75	9.999	ug/L	0.082	0	267	15856	1
	As-1	75	9.998	ug/L	0.137	1	8149	23661	0
	Se	82	9.994	ug/L	0.150	1	-5	1757	1
	Se	78	9.984	ug/L	0.305	3	8278	12676	0
	Mo	98	10.000	ug/L	0.223	2	17	46183	0
	Y	89		ug/L			298590	304853	1
	Kr	83		ug/L			554	549	4
>	In	115		ug/L			979916	992778	1
	Ag	107	10.000	ug/L	0.156	1	15	149069	0
	Cd	111	10.000	ug/L	0.103	1	63	50207	0
	Cd	114	10.000	ug/L	0.224	2	30	124907	1
	Sb	121	10.000	ug/L	0.138	1	102	155372	0
	Sb	123	10.000	ug/L	0.320	3	72	118774	1
	Ba	135	10.000	ug/L	0.135	1	11	43103	0
	Ba	137	10.000	ug/L	0.163	1	17	73732	0
>	Tb	159		ug/L			1160798	1162542	0
	Tl	205	10.000	ug/L	0.132	1	51	352078	1
	Pb	208	10.000	ug/L	0.169	1	139	470524	0
	Bi	209		ug/L			2367270	2386666	1
	Th	232	10.000	ug/L	0.184	1	21	436902	1
	U	238	10.000	ug/L	0.143	1	3	458868	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:11:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	707275	1
	Be	9	19.974	ug/L	0.190	0	5	45872	0
	C	13		ug/L			58801	57702	2
	Cl	37		ug/L			3025336	3009285	0
>	Sc	45		ug/L			671354	673020	0
	V	51	20.015	ug/L	0.101	0	5156	282424	0
	V-1	51	20.021	ug/L	0.178	0	130	280146	0
	Cr	52	19.955	ug/L	0.128	0	15247	253280	0
	Cr	53	19.977	ug/L	0.428	2	115	27892	2
	Mn	55	19.961	ug/L	0.737	3	250	330718	3
	Co	59	19.975	ug/L	0.174	0	40	260070	1
>	Ge	72		ug/L			457613	463277	1
	Ni	60	20.120	ug/L	0.373	1	22	57253	0
	Ni	62	19.957	ug/L	0.411	2	29	7978	3
	Cu	63	19.917	ug/L	0.856	4	58	125250	2
	Cu	65	19.971	ug/L	0.412	2	28	57994	0
	Zn	66	19.988	ug/L	0.667	3	143	34885	2
	Zn	67	19.876	ug/L	0.492	2	23	5653	0
	Zn	68	19.968	ug/L	1.162	5	137	24828	3
	As	75	20.031	ug/L	0.164	0	267	31464	1
	As-1	75	20.069	ug/L	0.097	0	8149	39286	1
	Se	82	19.982	ug/L	0.385	1	-5	3481	0
	Se	78	20.121	ug/L	0.349	1	8278	17074	1
	Mo	98	19.896	ug/L	0.749	3	17	89370	2
	Y	89		ug/L			298590	308237	0
	Kr	83		ug/L			554	552	4
>	In	115		ug/L			979916	989356	0
	Ag	107	19.915	ug/L	0.503	2	15	290934	3
	Cd	111	19.928	ug/L	0.229	1	63	98242	0
	Cd	114	19.906	ug/L	0.159	0	30	243250	1
	Sb	121	19.979	ug/L	0.171	0	102	307996	0
	Sb	123	19.936	ug/L	0.116	0	72	232976	0
	Ba	135	19.950	ug/L	0.042	0	11	84844	0
	Ba	137	19.946	ug/L	0.275	1	17	144984	0
>	Tb	159		ug/L			1160798	1165022	1
	Tl	205	19.967	ug/L	0.432	2	51	699768	0
	Pb	208	19.896	ug/L	0.367	1	139	918823	0
	Bi	209		ug/L			2367270	2348870	0
	Th	232	20.016	ug/L	0.421	2	21	879029	1
	U	238	19.921	ug/L	0.270	1	3	901701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	696747 ✓	0
[	Be	9	49.897	ug/L	0.686	1	5	111740	1
	C	13		ug/L			58801	54239	1
	Cl	37		ug/L			3025336	3163386	3
[>	Sc	45		ug/L			671354	669550 ✓	1
[	V	51	49.953	ug/L	0.938	1	5156	690266	1
[	V-1	51	49.924	ug/L	1.117	2	130	689391	1
[	Cr	52	49.941	ug/L	0.626	1	15247	604281	1
[	Cr	53	49.846	ug/L	1.163	2	115	68004	1
[	Mn	55	50.060	ug/L	0.708	1	250	829657	1
[	Co	59	49.981	ug/L	1.468	2	40	645933	1
[>	Ge	72		ug/L			457613	451350 ✓	2
[	Ni	60	49.978	ug/L	0.690	1	22	138232	1
[	Ni	62	50.065	ug/L	1.302	2	29	19572	1
[	Cu	63	50.245	ug/L	0.142	0	58	315663	2
[	Cu	65	50.084	ug/L	1.326	2	28	142830	0
[	Zn	66	49.801	ug/L	0.242	0	143	82900	2
[	Zn	67	49.945	ug/L	2.045	4	23	13735	4
[	Zn	68	50.018	ug/L	0.646	1	137	60532	1
[	As	75	50.171	ug/L	0.732	1	267	77698	0
[	As-1	75	50.217	ug/L	1.030	2	8149	85364	0
[	Se	82	50.031	ug/L	0.981	1	-5	8527	0
[	Se	78	50.209	ug/L	1.763	3	8278	29743	0
[	Mo	98	50.165	ug/L	1.652	3	17	223173	1
	Y	89		ug/L			298590	300790	2
	Kr	83		ug/L			554	563	5
[>	In	115		ug/L			979916	968693 ✓	1
[	Ag	107	49.690	ug/L	0.746	1	15	689235	0
[	Cd	111	49.942	ug/L	0.972	1	63	239540	0
[	Cd	114	49.889	ug/L	0.348	0	30	590254	0
[	Sb	121	49.991	ug/L	0.730	1	102	753665	0
[	Sb	123	49.934	ug/L	0.921	1	72	567409	1
[	Ba	135	50.037	ug/L	0.678	1	11	209096	0
[	Ba	137	50.124	ug/L	0.813	1	17	361169	0
[>	Tb	159		ug/L			1160798	1161518 ✓	0
[	Tl	205	49.835	ug/L	0.270	0	51	1713158	0
[	Pb	208	49.789	ug/L	0.286	0	139	2245124	0
[	Bi	209		ug/L			2367270	2294195	0
[	Th	232	49.756	ug/L	0.366	0	21	2126922	0
[	U	238	49.645	ug/L	0.102	0	3	2163987	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:22:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	687365	3
[	Be	9	98.884	ug/L	2.897	2	5	210487	0
	C	13		ug/L			58801	57400	3
	Cl	37		ug/L			3025336	3210120	1
[>	Sc	45		ug/L			671354	654119	1
[	V	51	100.575	ug/L	3.378	3	5156	1378884	2
[	V-1	51	100.357	ug/L	3.857	3	130	1369972	2
[	Cr	52	100.804	ug/L	0.438	0	15247	1208550	1
[	Cr	53	100.092	ug/L	1.590	1	115	133715	0
[	Mn	55	100.259	ug/L	0.882	0	250	1637308	1
[	Co	59	100.111	ug/L	2.851	2	40	1268759	1
[>	Ge	72		ug/L			457613	455029	0
[	Ni	60	99.662	ug/L	1.501	1	22	274842	1
[	Ni	62	99.528	ug/L	1.748	1	29	38602	1
[	Cu	63	99.316	ug/L	1.591	1	58	614945	1
[	Cu	65	99.163	ug/L	0.649	0	28	277436	0
[	Zn	66	99.507	ug/L	1.250	1	143	164160	0
[	Zn	67	99.083	ug/L	1.389	1	23	26643	1
[	Zn	68	99.192	ug/L	1.199	1	137	117753	1
[	As	75	99.617	ug/L	0.859	0	267	153343	0
[	As-1	75	99.658	ug/L	0.850	0	8149	161104	0
[	Se	82	99.163	ug/L	0.830	0	-5	16586	0
[	Se	78	99.322	ug/L	0.696	0	8278	50334	0
[	Mo	98	99.526	ug/L	0.646	0	17	439613	0
	Y	89		ug/L			298590	300499	0
	Kr	83		ug/L			554	599	2
[>	In	115		ug/L			979916	944524	0
[	Ag	107	99.198	ug/L	2.226	2	15	1306740	1
[	Cd	111	99.485	ug/L	1.704	1	63	457400	1
[	Cd	114	99.730	ug/L	1.497	1	30	1140177	0
[	Sb	121	99.787	ug/L	0.890	0	102	1456513	0
[	Sb	123	100.284	ug/L	0.778	0	72	1121824	1
[	Ba	135	100.151	ug/L	0.666	0	11	410163	1
[	Ba	137	100.195	ug/L	1.139	1	17	708572	0
[>	Tb	159		ug/L			1160798	1140586	0
[	Tl	205	99.199	ug/L	0.492	0	51	3261597	0
[	Pb	208	99.379	ug/L	0.874	0	139	4311163	0
[	Bi	209		ug/L			2367270	2201217	0
[	Th	232	99.564	ug/L	1.210	1	21	4119387	0
[	U	238	99.488	ug/L	0.549	0	3	4186821	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:29:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	697054	2
[	Be	9	0.004	ug/L	0.003	64	5	14	37
	C	13		ug/L			58801	54932	2
	Cl	37		ug/L			3025336	3115327	1
[>	Sc	45		ug/L			671354	652960	2
[	V	51	0.033	ug/L	0.012	36	5156	5458	1
[	V-1	51	0.012	ug/L	0.005	38	130	294	19
[	Cr	52	0.099	ug/L	0.033	33	15247	15991	0
[	Cr	53	0.032	ug/L	0.009	27	115	155	5
[	Mn	55	0.007	ug/L	0.005	72	250	350	20
[	Co	59	0.004	ug/L	0.004	106	40	85	56
[>	Ge	72		ug/L			457613	460060	0
[	Ni	60	0.003	ug/L	0.006	196	22	31	51
[	Ni	62	0.105	ug/L	0.039	36	29	71	21
[	Cu	63	0.009	ug/L	0.004	44	58	116	22
[	Cu	65	0.003	ug/L	0.003	113	28	37	25
[	Zn	66	-0.011	ug/L	0.007	63	143	126	9
[	Zn	67	0.013	ug/L	0.024	184	23	27	23
[	Zn	68	-0.001	ug/L	0.004	252	137	136	3
[	As	75	0.004	ug/L	0.012	319	267	275	6
[	As-1	75	0.156	ug/L	0.030	19	8149	8435	0
[	Se	82	0.079	ug/L	0.042	52	-5	8	87
[	Se	78	0.569	ug/L	0.090	15	8278	8567	0
[	Mo	98	0.029	ug/L	0.008	27	17	145	24
	Y	89		ug/L			298590	298582	0
	Kr	83		ug/L			554	524	4
[>	In	115		ug/L			979916	957945	0
[	Ag	107	0.007	ug/L	0.005	67	15	104	58
[	Cd	111	0.009	ug/L	0.005	52	63	104	21
[	Cd	114	0.004	ug/L	0.003	69	30	77	43
[	Sb	121	0.111	ug/L	0.008	7	102	1736	7
[	Sb	123	0.115	ug/L	0.007	5	72	1374	5
[	Ba	135	0.004	ug/L	0.004	105	11	26	59
[	Ba	137	0.004	ug/L	0.006	124	17	48	81
[>	Tb	159		ug/L			1160798	1096676	2
[	Tl	205	0.022	ug/L	0.003	12	51	732	9
[	Pb	208	0.006	ug/L	0.008	124	139	390	81
[	Bi	209		ug/L			2367270	2301499	1
[	Th	232	0.136	ug/L	0.032	23	21	5414	22
[	U	238	0.007	ug/L	0.006	93	3	270	90

Sample Information

Sample Date/Time: Thursday, November 15, 2012 12:29:30
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9998**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.021	0.20	10	20	50	100
V-1	51	**1.0000**	0.021	0.20	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Co	59	**1.0000**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.010	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.014	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.029	0.20	10	20	50	100
Pb	208	**0.9999**	0.038	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.036	0.20	10	20	50	100
U	238	**0.9999**	0.037	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICV~~ 222222
Sample Dil Factor: 11.15.12 MJJ
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:37:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			0	690107	0
[	Be	9	53.146	ug/L	0.766	1	0	113655	2
	C	13		ug/L			0	58734	1
	Cl	37		ug/L			0	3218935	3
[>	Sc	45		ug/L			0	672341	1
[	V	51	51.135	ug/L	1.411	2	0	718001	1
[	V-1	51	51.269	ug/L	1.224	2	0	719375	1
[	Cr	52	51.116	ug/L	1.808	3	0	621996	2
[	Cr	53	51.554	ug/L	1.461	2	0	70724	1
[	Mn	55	50.623	ug/L	0.324	0	0	849591	0
[	Co	59	50.494	ug/L	1.283	2	0	657818	2
[>	Ge	72		ug/L			0	469528	2
[	Ni	60	51.045	ug/L	1.012	1	0	145194	1
[	Ni	62	50.392	ug/L	0.923	1	0	20146	1
[	Cu	63	50.431	ug/L	1.704	3	0	322032	2
[	Cu	65	51.674	ug/L	1.650	3	0	149088	1
[	Zn	66	49.950	ug/L	1.747	3	0	84910	1
[	Zn	67	51.040	ug/L	2.180	4	0	14137	1
[	Zn	68	49.942	ug/L	0.951	1	0	61094	2
[	As	75	49.536	ug/L	0.730	1	0	78525	1
[	As-1	75	54.687	ug/L	0.896	1	0	86610	1
[	Se	82	77.809	ug/L	2.086	2	0	13427	0
[	Se	78	97.432	ug/L	2.602	2	0	42596	0
[	Mo	98	47.414	ug/L	1.368	2	0	216012	1
	Y	89		ug/L			0	303652	0
	Kr	83		ug/L			0	553	2
[>	In	115		ug/L			0	972119	1
[	Ag	107	49.472	ug/L	0.758	1	0	670726	1
[	Cd	111	49.450	ug/L	0.135	0	0	233986	1
[	Cd	114	49.954	ug/L	0.778	1	0	587773	1
[	Sb	121	49.688	ug/L	0.336	0	0	746416	1
[	Sb	123	49.378	ug/L	1.080	2	0	568383	1
[	Ba	135	50.653	ug/L	0.778	1	0	213478	0
[	Ba	137	50.086	ug/L	0.201	0	0	364553	0
[>	Tb	159		ug/L			0	1145568	0
[	Tl	205	52.835	ug/L	0.080	0	0	1744757	0
[	Pb	208	52.193	ug/L	0.627	1	0	2273959	0
[	Bi	209		ug/L			0	2233958	1
[	Th	232	52.401	ug/L	0.533	1	0	2177561	0
[	U	238	53.356	ug/L	0.280	0	0	2255260	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:45:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	679842	0
	Be	9	52.033	ug/L	0.897	1	5	109609	1
	C	13		ug/L			58801	58588	3
	Cl	37		ug/L			3025336	3137156	1
>	Sc	45		ug/L			671354	663548	1
	V	51	50.369	ug/L	1.559	3	5156	703055	2
	V-1	51	51.026	ug/L	1.308	2	130	706690	1
	Cr	52	49.148	ug/L	1.798	3	15247	605277	2
	Cr	53	51.294	ug/L	1.325	2	115	69558	1
	Mn	55	49.800	ug/L	1.636	3	250	824882	1
	Co	59	50.757	ug/L	1.909	3	40	652468	2
>	Ge	72		ug/L			457613	473522	2
	Ni	60	49.094	ug/L	1.705	3	22	140845	3
	Ni	62	49.307	ug/L	0.997	2	29	19910	1
	Cu	63	49.414	ug/L	1.923	3	58	318202	1
	Cu	65	49.824	ug/L	1.135	2	28	145015	0
	Zn	66	49.078	ug/L	2.006	4	143	84273	1
	Zn	67	49.714	ug/L	2.289	4	23	13910	1
	Zn	68	48.338	ug/L	1.365	2	137	59753	0
	As	75	49.141	ug/L	2.527	5	267	78784	2
	As-1	75	49.011	ug/L	2.500	5	8149	86664	2
	Se	82	76.836	ug/L	3.394	4	-5	13361	1
	Se	78	76.378	ug/L	3.306	4	8278	42232	1
	Mo	98	46.387	ug/L	2.488	5	17	213021	2
	Y	89		ug/L			298590	300868	2
	Kr	83		ug/L			554	563	4
>	In	115		ug/L			979916	953436	0
	Ag	107	48.913	ug/L	0.733	1	15	650479	2
	Cd	111	49.593	ug/L	0.101	0	63	230208	0
	Cd	114	49.704	ug/L	0.452	0	30	573631	0
	Sb	121	49.579	ug/L	0.247	0	102	730567	1
	Sb	123	49.446	ug/L	0.673	1	72	558346	1
	Ba	135	50.215	ug/L	0.617	1	11	207610	2
	Ba	137	50.215	ug/L	0.489	0	17	358504	1
>	Tb	159		ug/L			1160798	1132838	0
	Tl	205	52.259	ug/L	0.886	1	51	1706490	1
	Pb	208	51.235	ug/L	0.802	1	139	2207482	0
	Bi	209		ug/L			2367270	2236728	0
	Th	232	51.732	ug/L	1.328	2	21	2125707	1
	U	238	52.606	ug/L	1.153	2	3	2198678	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:54:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	669243	2
[	Be	9	0.004	ug/L	0.004	115	5	13	66
	C	13		ug/L			58801	54183	1
	Cl	37		ug/L			3025336	3033736	1
[>	Sc	45		ug/L			671354	641399	1
[	V	51	0.023	ug/L	0.011	47	5156	5231	2
[	V-1	51	0.006	ug/L	0.003	43	130	205	15
[	Cr	52	0.079	ug/L	0.025	32	15247	15481	0
[	Cr	53	0.024	ug/L	0.013	53	115	142	10
[	Mn	55	0.004	ug/L	0.003	60	250	307	11
[	Co	59	0.002	ug/L	0.002	92	40	59	32
[>	Ge	72		ug/L			457613	463989	2
[	Ni	60	-0.000	ug/L	0.002	32711	22	23	23
[	Ni	62	0.122	ug/L	0.014	11	29	78	5
[	Cu	63	0.010	ug/L	0.004	46	58	119	22
[	Cu	65	-0.001	ug/L	0.001	94	28	25	9
[	Zn	66	-0.004	ug/L	0.003	63	143	137	2
[	Zn	67	-0.009	ug/L	0.008	92	23	21	11
[	Zn	68	-0.002	ug/L	0.005	240	137	136	4
[	As	75	-0.008	ug/L	0.038	451	267	257	20
[	As-1	75	0.092	ug/L	0.158	173	8149	8401	0
[	Se	82	-0.008	ug/L	0.105	1266	-5	-7	252
[	Se	78	0.354	ug/L	0.540	152	8278	8543	0
[	Mo	98	0.012	ug/L	0.001	11	17	69	9
	Y	89		ug/L			298590	293125	0
	Kr	83		ug/L			554	562	1
[>	In	115		ug/L			979916	951777	1
[	Ag	107	0.002	ug/L	0.001	39	15	41	26
[	Cd	111	0.003	ug/L	0.001	21	63	76	2
[	Cd	114	0.001	ug/L	0.002	109	30	46	40
[	Sb	121	0.027	ug/L	0.006	23	102	491	17
[	Sb	123	0.029	ug/L	0.006	19	72	393	15
[	Ba	135	0.004	ug/L	0.009	200	11	29	122
[	Ba	137	0.004	ug/L	0.007	167	17	47	109
[>	Tb	159		ug/L			1160798	1078092	1
[	Tl	205	0.009	ug/L	0.007	76	51	314	62
[	Pb	208	0.005	ug/L	0.007	138	139	324	82
[	Bi	209		ug/L			2367270	2257219	0
[	Th	232	0.067	ug/L	0.010	14	21	2631	12
[	U	238	0.004	ug/L	0.004	88	3	165	84

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 12:58:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	672643	1
	Be	9	51.640	ug/L	1.204	2	5	107647	3
	C	13		ug/L			58801	54915	2
	Cl	37		ug/L			3025336	3145302	2
>	Sc	45		ug/L			671354	649221	1
	V	51	49.830	ug/L	0.563	1	5156	680651	0
	V-1	51	50.212	ug/L	0.923	1	130	680465	1
	Cr	52	50.260	ug/L	1.406	2	15247	605352	2
	Cr	53	51.510	ug/L	1.619	3	115	68345	2
	Mn	55	50.304	ug/L	0.454	0	250	815413	0
	Co	59	51.786	ug/L	0.231	0	40	651516	1
>	Ge	72		ug/L			457613	459939	1
	Ni	60	50.470	ug/L	1.372	2	22	140653	1
	Ni	62	49.846	ug/L	0.648	1	29	19555	0
	Cu	63	51.230	ug/L	2.106	4	58	320542	2
	Cu	65	51.245	ug/L	1.016	1	28	144908	0
	Zn	66	49.705	ug/L	1.726	3	143	82938	2
	Zn	67	51.199	ug/L	1.131	2	23	13926	2
	Zn	68	51.268	ug/L	0.740	1	137	61576	0
	As	75	49.582	ug/L	1.100	2	267	77269	1
	As-1	75	50.018	ug/L	0.989	1	8149	85799	1
	Se	82	49.834	ug/L	1.549	3	-5	8420	1
	Se	78	51.372	ug/L	1.242	2	8278	30327	0
	Mo	98	48.399	ug/L	0.835	1	17	216091	2
	Y	89		ug/L			298590	298621	0
	Kr	83		ug/L			554	557	5
>	In	115		ug/L			979916	938906	1
	Ag	107	47.685	ug/L	0.692	1	15	624431	1
	Cd	111	50.910	ug/L	0.097	0	63	232717	1
	Cd	114	50.700	ug/L	1.020	2	30	576141	1
	Sb	121	50.246	ug/L	0.821	1	102	728986	0
	Sb	123	49.941	ug/L	1.037	2	72	555258	1
	Ba	135	50.622	ug/L	1.064	2	11	206045	0
	Ba	137	50.218	ug/L	1.309	2	17	352955	1
>	Tb	159		ug/L			1160798	1111509	1
	Tl	205	51.733	ug/L	0.826	1	51	1657421	0
	Pb	208	51.292	ug/L	0.795	1	139	2168210	0
	Bi	209		ug/L			2367270	2215073	0
	Th	232	50.837	ug/L	0.534	1	21	2049675	0
	U	238	52.131	ug/L	1.387	2	3	2137564	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:05:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	673300	0
	Be	9	0.002	ug/L	0.001	33	5	8	13
	C	13		ug/L			58801	56331	3
	Cl	37		ug/L			3025336	3054027	1
>	Sc	45		ug/L			671354	643550	1
	V	51	0.024	ug/L	0.008	32	5156	5265	2
	V-1	51	0.002	ug/L	0.001	56	130	158	13
	Cr	52	0.080	ug/L	0.037	46	15247	15550	3
	Cr	53	0.010	ug/L	0.012	122	115	124	13
	Mn	55	0.003	ug/L	0.002	54	250	285	10
	Co	59	0.001	ug/L	0.000	56	40	46	10
>	Ge	72		ug/L			457613	454935	1
	Ni	60	0.004	ug/L	0.007	182	22	33	60
	Ni	62	0.143	ug/L	0.038	26	29	85	18
	Cu	63	0.009	ug/L	0.001	8	58	113	5
	Cu	65	0.001	ug/L	0.004	298	28	32	36
	Zn	66	-0.010	ug/L	0.008	80	143	125	9
	Zn	67	-0.004	ug/L	0.013	290	23	22	15
	Zn	68	-0.006	ug/L	0.005	84	137	129	2
	As	75	-0.012	ug/L	0.007	57	267	248	5
	As-1	75	0.278	ug/L	0.134	48	8149	8526	1
	Se	82	-0.055	ug/L	0.059	107	-5	-14	67
	Se	78	1.018	ug/L	0.490	48	8278	8659	1
	Mo	98	0.016	ug/L	0.002	14	17	86	11
	Y	89		ug/L			298590	293139	1
	Kr	83		ug/L			554	565	5
>	In	115		ug/L			979916	934887	0
	Ag	107	0.002	ug/L	0.001	30	15	45	20
	Cd	111	0.005	ug/L	0.003	61	63	81	16
	Cd	114	0.002	ug/L	0.001	61	30	51	26
	Sb	121	0.067	ug/L	0.006	8	102	1068	8
	Sb	123	0.066	ug/L	0.007	10	72	796	9
	Ba	135	0.002	ug/L	0.001	27	11	21	12
	Ba	137	0.001	ug/L	0.001	156	17	22	42
>	Tb	159		ug/L			1160798	1068831	0
	Tl	205	0.006	ug/L	0.002	28	51	218	22
	Pb	208	0.001	ug/L	0.001	81	139	162	16
	Bi	209		ug/L			2367270	2233301	1
	Th	232	0.113	ug/L	0.016	13	21	4384	13
	U	238	0.002	ug/L	0.000	21	3	80	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:09:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	664724	1
[	Be	9	0.218	ug/L	0.013	6	5	453	5
	C	13		ug/L			58801	56361	3
	Cl	37		ug/L			3025336	2995308	2
[>	Sc	45		ug/L			671354	647077	3
[	V	51	0.232	ug/L	0.023	9	5156	8106	1
[	V-1	51	0.208	ug/L	0.013	6	130	2938	3
[	Cr	52	0.610	ug/L	0.062	10	15247	21826	0
[	Cr	53	0.532	ug/L	0.023	4	115	813	0
[	Mn	55	0.520	ug/L	0.023	4	250	8637	2
[	Co	59	0.214	ug/L	0.013	6	40	2718	3
[>	Ge	72		ug/L			457613	451418	1
[	Ni	60	0.520	ug/L	0.014	2	22	1445	1
[	Ni	62	0.662	ug/L	0.059	8	29	283	7
[	Cu	63	0.541	ug/L	0.007	1	58	3380	2
[	Cu	65	0.550	ug/L	0.030	5	28	1553	6
[	Zn	66	4.418	ug/L	0.132	2	143	7364	2
[	Zn	67	4.073	ug/L	0.109	2	23	1108	1
[	Zn	68	4.349	ug/L	0.026	0	137	5250	1
[	As	75	0.190	ug/L	0.018	9	267	553	5
[	As-1	75	0.540	ug/L	0.025	4	8149	8861	1
[	Se	82	0.584	ug/L	0.048	8	-5	91	9
[	Se	78	1.794	ug/L	0.117	6	8278	8920	1
[	Mo	98	0.193	ug/L	0.006	3	17	863	3
	Y	89		ug/L			298590	296537	0
	Kr	83		ug/L			554	517	1
[>	In	115		ug/L			979916	943085	1
[	Ag	107	0.202	ug/L	0.005	2	15	2676	1
[	Cd	111	0.115	ug/L	0.009	7	63	588	6
[	Cd	114	0.107	ug/L	0.005	4	30	1252	5
[	Sb	121	0.213	ug/L	0.007	3	102	3206	2
[	Sb	123	0.215	ug/L	0.003	1	72	2471	0
[	Ba	135	0.511	ug/L	0.022	4	11	2099	3
[	Ba	137	0.493	ug/L	0.006	1	17	3497	1
[>	Tb	159		ug/L			1160798	1071843	1
[	Tl	205	0.222	ug/L	0.004	1	51	6896	0
[	Pb	208	0.116	ug/L	0.004	3	139	4848	1
[	Bi	209		ug/L			2367270	2241773	0
[	Th	232	0.260	ug/L	0.007	2	21	10131	1
[	U	238	0.219	ug/L	0.005	2	3	8666	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:13:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	657521	1
	Be	9	0.000	ug/L	0.001	971	5	5	39
	C	13		ug/L			58801	113952	2
	Cl	37		ug/L			3025336	8335589	2
>	Sc	45		ug/L			671354	664054	2
	V	51	0.068	ug/L	0.032	47	5156	6048	8
	V-1	51	1.416	ug/L	0.043	3	130	19751	0
	Cr	52	0.596	ug/L	0.030	5	15247	22239	1
	Cr	53	5.006	ug/L	0.187	3	115	6895	1
	Mn	55	0.047	ug/L	0.004	7	250	1033	3
	Co	59	0.021	ug/L	0.001	3	40	307	1
>	Ge	72		ug/L			457613	442144	1
	Ni	60	0.343	ug/L	0.014	4	22	941	3
	Ni	62	2.875	ug/L	0.551	19	29	1109	17
	Cu	63	0.946	ug/L	0.047	4	58	5742	3
	Cu	65	0.305	ug/L	0.024	8	28	855	6
	Zn	66	0.896	ug/L	0.009	1	143	1572	0
	Zn	67	6.568	ug/L	0.015	0	23	1737	1
	Zn	68	0.398	ug/L	0.021	5	137	590	2
	As	75	0.049	ug/L	0.058	119	267	331	25
	As-1	75	0.468	ug/L	0.102	21	8149	8570	0
	Se	82	-0.219	ug/L	0.106	48	-5	-41	43
	Se	78	1.645	ug/L	0.274	16	8278	8675	0
	Mo	98	417.302 ✓	ug/L	10.636	2	17	1790660	1
	Y	89		ug/L			298590	294224	1
	Kr	83		ug/L			554	719	5
>	In	115		ug/L			979916	944291	1
	Ag	107	0.026	ug/L	0.002	7	15	350	6
	Cd	111	0.113	ug/L	0.014	12	63	580	11
	Cd	114	0.266	ug/L	0.002	0	30	3070	0
	Sb	121	0.070	ug/L	0.003	4	102	1126	4
	Sb	123	0.073	ug/L	0.003	4	72	883	5
	Ba	135	0.051	ug/L	0.003	6	11	219	6
	Ba	137	0.041	ug/L	0.002	5	17	309	5
>	Tb	159		ug/L			1160798	1158938	1
	Tl	205	0.036	ug/L	0.001	2	51	1249	2
	Pb	208	0.031	ug/L	0.001	3	139	1493	3
	Bi	209		ug/L			2367270	2140693	0
	Th	232	0.234	ug/L	0.129	55	21	9824	53
	U	238	0.002	ug/L	0.000	18	3	70	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:19:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	650871 ✓	1
	Be	9	0.001	ug/L	0.001	167	5	6	32
	C	13		ug/L			58801	113109	1
	Cl	37		ug/L			3025336	8133764	2
>	Sc	45		ug/L			671354	649064 ✓	1
	V	51	0.067	ug/L	0.164	243	5156	5874	36
	V-1	51	1.481	ug/L	0.048	3	130	20184	1
	Cr	52	20.105	ug/L	0.697	3	15247	250901	1
	Cr	53	24.778	ug/L	0.349	1	115	32928	0
	Mn	55	19.515	ug/L	0.173	0	250	316411	0
	Co	59	19.846	ug/L	0.342	1	40	249666	2
>	Ge	72		ug/L			457613	434992 ✓	1
	Ni	60	20.342	ug/L	0.279	1	22	53640	1
	Ni	62	23.807	ug/L	0.494	2	29	8848	1
	Cu	63	20.600	ug/L	0.126	0	58	121985	1
	Cu	65	20.475	ug/L	0.552	2	28	54772	1
	Zn	66	20.028	ug/L	0.288	1	143	31692	0
	Zn	67	24.416	ug/L	0.108	0	23	6293	0
	Zn	68	18.434	ug/L	0.234	1	137	21023	0
	As	75	19.377	ug/L	0.169	0	267	28716	0
	As-1	75	19.980	ug/L	0.202	1	8149	37068	0
	Se	82	-0.204	ug/L	0.108	52	-5	-37	46
	Se	78	2.215	ug/L	0.164	7	8278	8766	0
	Mo	98	420.975	ug/L	13.426	3	17	1777102	1
	Y	89		ug/L			298590	291174	0
	Kr	83		ug/L			554	682	6
>	In	115		ug/L			979916	947542 ✓	1
	Ag	107	20.273	ug/L	0.411	2	15	267896	1
	Cd	111	19.776	ug/L	0.253	1	63	91272	1
	Cd	114	19.879	ug/L	0.241	1	30	228016	0
	Sb	121	0.069	ug/L	0.004	5	102	1115	4
	Sb	123	0.071	ug/L	0.002	2	72	869	1
	Ba	135	0.050	ug/L	0.000	0	11	217	1
	Ba	137	0.045	ug/L	0.002	3	17	334	3
>	Tb	159		ug/L			1160798	1159475 ✓	1
	Tl	205	0.033	ug/L	0.003	8	51	1142	6
	Pb	208	0.033	ug/L	0.000	1	139	1588	0
	Bi	209		ug/L			2367270	2159771	0
	Th	232	0.072	ug/L	0.019	26	21	3041	26
	U	238	0.000	ug/L	0.000	12	3	23	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:26:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	609319	1
	Be	9	206.077	ug/L	3.482	1	5	389040	1
	C	13		ug/L			58801	55833	0
	Cl	37		ug/L			3025336	3189014	2
>	Sc	45		ug/L			671354	602641	1
	V	51	195.948	ug/L	7.680	3	5156	2470524	2
	V-1	51	199.129	ug/L	7.737	3	130	2504225	2
	Cr	52	195.961	ug/L	4.733	2	15247	2151167	1
	Cr	53	206.364	ug/L	5.092	2	115	253859	1
	Mn	55	195.404	ug/L	3.233	1	250	2939491	1
	Co	59	200.405	ug/L	6.381	3	40	2339954	2
>	Ge	72		ug/L			457613	425535	0
	Ni	60	198.985	ug/L	2.180	1	22	513113	0
	Ni	62	198.880	ug/L	1.683	0	29	72115	1
	Cu	63	200.571	ug/L	1.648	0	58	1161356	0
	Cu	65	199.425	ug/L	4.286	2	28	521708	1
	Zn	66	194.570	ug/L	5.667	2	143	300077	3
	Zn	67	199.674	ug/L	5.517	2	23	50182	2
	Zn	68	191.986	ug/L	2.160	1	137	213004	0
	As	75	197.213	ug/L	2.875	1	267	283637	0
	As-1	75	197.476	ug/L	2.860	1	8149	291090	0
	Se	82	194.359	ug/L	2.528	1	-5	30405	0
	Se	78	195.440	ug/L	2.980	1	8278	85172	1
	Mo	98	202.854	ug/L	4.196	2	17	837990	2
	Y	89		ug/L			298590	282070	2
	Kr	83		ug/L			554	661	0
>	In	115		ug/L			979916	910337	2
	Ag	107	185.645	ug/L	3.522	1	15	2356522	0
	Cd	111	197.211	ug/L	2.645	1	63	873743	0
	Cd	114	192.799	ug/L	3.502	1	30	2124127	1
	Sb	121	196.719	ug/L	3.933	1	102	2766689	0
	Sb	123	197.492	ug/L	4.290	2	72	2128579	0
	Ba	135	207.938	ug/L	4.721	2	11	820519	0
	Ba	137	207.000	ug/L	4.826	2	17	1410525	0
>	Tb	159		ug/L			1160798	1104780	0
	Tl	205	197.430	ug/L	1.709	0	51	6287827	1
	Pb	208	196.838	ug/L	1.394	0	139	8270727	0
	Bi	209		ug/L			2367270	2090096	1
	Th	232	201.470	ug/L	1.463	0	21	8074015	0
	U	238	201.287	ug/L	3.374	1	3	8204463	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:33:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	577075	2
	Be	9	306.409	ug/L	13.494	4	5	547527	2
	C	13		ug/L			58801	55076	2
	Cl	37		ug/L			3025336	3162904	4
>	Sc	45		ug/L			671354	612226	1
	V	51	283.797	ug/L	9.660	3	5156	3632748	1
	V-1	51	289.290	ug/L	8.982	3	130	3695831	1
	Cr	52	282.229	ug/L	7.460	2	15247	3141339	1
	Cr	53	300.191	ug/L	3.095	1	115	375145	0
	Mn	55	281.724	ug/L	4.653	1	250	4305097	0
	Co	59	293.242	ug/L	0.943	0	40	3478953	1
>	Ge	72		ug/L			457613	422819	1
	Ni	60	290.818	ug/L	8.256	2	22	745163	3
	Ni	62	299.097	ug/L	5.548	1	29	107725	0
	Cu	63	291.362	ug/L	2.585	0	58	1676304	1
	Cu	65	293.934	ug/L	6.524	2	28	763966	1
	Zn	66	282.337	ug/L	7.145	2	143	432483	1
	Zn	67	289.816	ug/L	6.451	2	23	72355	0
	Zn	68	280.385	ug/L	0.872	0	137	309043	1
	As	75	292.245	ug/L	0.429	0	267	417538	1
	As-1	75	294.389	ug/L	2.060	0	8149	427505	1
	Se	82	278.441	ug/L	5.430	1	-5	43279	1
	Se	78	286.376	ug/L	5.724	1	8278	120435	1
	Mo	98	288.631	ug/L	5.818	2	17	1184544	1
	Y	89		ug/L			298590	273325	1
	Kr	83		ug/L			554	740	5
>	In	115		ug/L			979916	863682	0
	Ag	107	257.877	ug/L	12.200	4	15	3106982	5
	Cd	111	292.348	ug/L	4.398	1	63	1229105	2
	Cd	114	287.278	ug/L	3.540	1	30	3003373	1
	Sb	121	294.235	ug/L	2.356	0	102	3927140	1
	Sb	123	293.233	ug/L	2.550	0	72	2999273	0
	Ba	135	317.752	ug/L	2.211	0	11	1189941	1
	Ba	137	309.519	ug/L	2.815	0	17	2001559	0
>	Tb	159		ug/L			1160798	1089373	0
	Tl	205	292.709	ug/L	4.715	1	51	9191409	1
	Pb	208	286.234	ug/L	3.533	1	139	11858836	0
	Bi	209		ug/L			2367270	1988062	0
	Th	232	295.250	ug/L	3.596	1	21	11667334	0
	U	238	297.492	ug/L	3.924	1	3	11957127	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:40:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	615194	3
	Be	9	0.003	ug/L	0.003	93	5	10	53
	C	13		ug/L			58801	54586	1
	Cl	37		ug/L			3025336	3096695	3
>	Sc	45		ug/L			671354	611140	0
	V	51	0.038	ug/L	0.010	26	5156	5184	2
	V-1	51	0.012	ug/L	0.001	8	130	267	4
	Cr	52	0.139	ug/L	0.031	22	15247	15413	1
	Cr	53	0.051	ug/L	0.007	13	115	169	4
	Mn	55	0.021	ug/L	0.001	4	250	546	2
	Co	59	0.002	ug/L	0.000	21	40	63	8
>	Ge	72		ug/L			457613	448126	0
	Ni	60	0.022	ug/L	0.002	8	22	82	6
	Ni	62	0.801	ug/L	0.094	11	29	334	10
	Cu	63	0.067	ug/L	0.007	11	58	468	9
	Cu	65	0.022	ug/L	0.003	14	28	87	9
	Zn	66	1.043	ug/L	0.030	2	143	1833	2
	Zn	67	1.049	ug/L	0.095	9	23	300	7
	Zn	68	1.045	ug/L	0.024	2	137	1354	2
	As	75	-0.008	ug/L	0.032	384	267	249	18
	As-1	75	0.414	ug/L	0.077	18	8149	8605	0
	Se	82	0.012	ug/L	0.040	335	-5	-3	197
	Se	78	1.501	ug/L	0.228	15	8278	8733	0
	Mo	98	0.053	ug/L	0.007	13	17	246	13
	Y	89		ug/L			298590	286909	2
	Kr	83		ug/L			554	524	4
>	In	115		ug/L			979916	914244	1
	Ag	107	0.007	ug/L	0.002	27	15	106	23
	Cd	111	0.011	ug/L	0.002	19	63	109	7
	Cd	114	0.005	ug/L	0.000	8	30	79	6
	Sb	121	0.289	ug/L	0.028	9	102	4176	8
	Sb	123	0.298	ug/L	0.027	8	72	3292	7
	Ba	135	0.012	ug/L	0.002	19	11	58	14
	Ba	137	0.011	ug/L	0.002	14	17	93	10
>	Tb	159		ug/L			1160798	1059904	0
	Tl	205	0.040	ug/L	0.014	35	51	1254	33
	Pb	208	0.009	ug/L	0.001	6	139	506	5
	Bi	209		ug/L			2367270	2213777	1
	Th	232	0.176	ug/L	0.025	14	21	6781	14
	U	238	0.005	ug/L	0.001	11	3	210	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:46:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	619916	1
	Be	9	0.001	ug/L	0.003	301	5	6	82
	C	13		ug/L			58801	55312	1
	Cl	37		ug/L			3025336	3021845	2
>	Sc	45		ug/L			671354	605160	3
	V	51	0.032	ug/L	0.019	58	5156	5045	1
	V-1	51	0.009	ug/L	0.001	10	130	234	1
	Cr	52	0.117	ug/L	0.062	52	15247	15005	1
	Cr	53	0.043	ug/L	0.012	27	115	157	9
	Mn	55	0.030	ug/L	0.002	6	250	684	3
	Co	59	0.002	ug/L	0.002	94	40	63	41
>	Ge	72		ug/L			457613	442941	1
	Ni	60	0.031	ug/L	0.007	24	22	103	17
	Ni	62	0.557	ug/L	0.044	7	29	239	7
	Cu	63	0.049	ug/L	0.001	2	58	354	1
	Cu	65	0.017	ug/L	0.004	24	28	74	14
	Zn	66	1.371	ug/L	0.046	3	143	2337	3
	Zn	67	1.215	ug/L	0.068	5	23	340	6
	Zn	68	1.322	ug/L	0.028	2	137	1658	2
	As	75	-0.003	ug/L	0.014	478	267	255	8
	As-1	75	0.332	ug/L	0.124	37	8149	8382	1
	Se	82	-0.012	ug/L	0.037	300	-5	-7	83
	Se	78	1.186	ug/L	0.441	37	8278	8501	0
	Mo	98	0.017	ug/L	0.005	28	17	89	23
	Y	89		ug/L			298590	286549	0
	Kr	83		ug/L			554	531	1
>	In	115		ug/L			979916	917489	0
	Ag	107	0.003	ug/L	0.000	9	15	56	6
	Cd	111	0.006	ug/L	0.002	34	63	86	11
	Cd	114	0.002	ug/L	0.001	27	30	52	12
	Sb	121	0.084	ug/L	0.007	8	102	1281	7
	Sb	123	0.085	ug/L	0.012	14	72	985	12
	Ba	135	0.018	ug/L	0.002	11	11	81	9
	Ba	137	0.014	ug/L	0.002	17	17	115	13
>	Tb	159		ug/L			1160798	1062534	0
	Tl	205	0.022	ug/L	0.011	51	51	713	47
	Pb	208	0.010	ug/L	0.000	2	139	548	2
	Bi	209		ug/L			2367270	2213394	0
	Th	232	0.066	ug/L	0.003	4	21	2557	5
	U	238	0.002	ug/L	0.000	3	3	71	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:52:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	641603	1
	Be	9	0.001	ug/L	0.002	129	5	7	45
	C	13		ug/L			58801	56930	4
	Cl	37		ug/L			3025336	3060608	1
>	Sc	45		ug/L			671354	611885	0
	V	51	0.030	ug/L	0.002	6	5156	5085	0
	V-1	51	0.006	ug/L	0.001	19	130	198	7
	Cr	52	0.112	ug/L	0.009	7	15247	15135	0
	Cr	53	0.034	ug/L	0.008	24	115	147	6
	Mn	55	0.013	ug/L	0.001	9	250	424	4
	Co	59	0.002	ug/L	0.000	14	40	61	5
>	Ge	72		ug/L			457613	449443	0
	Ni	60	0.024	ug/L	0.005	21	22	86	14
	Ni	62	0.436	ug/L	0.036	8	29	196	7
	Cu	63	0.037	ug/L	0.002	4	58	283	4
	Cu	65	0.011	ug/L	0.004	33	28	57	16
	Zn	66	0.740	ug/L	0.051	6	143	1344	5
	Zn	67	0.727	ug/L	0.042	5	23	216	5
	Zn	68	0.758	ug/L	0.024	3	137	1022	2
	As	75	0.012	ug/L	0.020	169	267	280	11
	As-1	75	0.213	ug/L	0.052	24	8149	8326	0
	Se	82	0.084	ug/L	0.042	50	-5	8	80
	Se	78	0.745	ug/L	0.238	31	8278	8442	0
	Mo	98	0.011	ug/L	0.003	31	17	63	23
	Y	89		ug/L			298590	284306	2
	Kr	83		ug/L			554	509	6
>	In	115		ug/L			979916	922948	1
	Ag	107	0.003	ug/L	0.002	60	15	55	44
	Cd	111	0.003	ug/L	0.003	121	63	71	19
	Cd	114	0.004	ug/L	0.002	68	30	68	39
	Sb	121	0.042	ug/L	0.005	11	102	696	9
	Sb	123	0.043	ug/L	0.005	11	72	535	9
	Ba	135	0.011	ug/L	0.004	41	11	53	32
	Ba	137	0.009	ug/L	0.000	2	17	81	2
>	Tb	159		ug/L			1160798	1075302	0
	Tl	205	0.014	ug/L	0.004	28	51	470	25
	Pb	208	0.008	ug/L	0.001	16	139	451	11
	Bi	209		ug/L			2367270	2229145	1
	Th	232	0.047	ug/L	0.007	15	21	1860	14
	U	238	0.001	ug/L	0.001	62	3	59	58

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 13:56:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	629463 ✓	1
	Be	9	52.179	ug/L	2.220	4	5	101728	2
	C	13		ug/L			58801	52038	1
	Cl	37		ug/L			3025336	3115060	1
>	Sc	45		ug/L			671354	629930 ✓	1
	V	51	48.870	ug/L	0.634	1	5156	647808	0
	V-1	51	48.942	ug/L	0.592	1	130	643582	0
	Cr	52	49.933	ug/L	0.545	1	15247	583698	0
	Cr	53	50.172	ug/L	0.410	0	115	64606	1
	Mn	55	48.989	ug/L	1.592	3	250	770446	2
	Co	59	50.515	ug/L	1.603	3	40	616810	4
>	Ge	72		ug/L			457613	455134 ✓	0
	Ni	60	48.271	ug/L	0.443	0	22	133154	1
	Ni	62	48.036	ug/L	1.413	2	29	18649	2
	Cu	63	49.005	ug/L	0.631	1	58	303515	0
	Cu	65	49.250	ug/L	0.691	1	28	137826	0
	Zn	66	49.059	ug/L	0.414	0	143	81025	0
	Zn	67	51.214	ug/L	0.658	1	23	13786	1
	Zn	68	49.331	ug/L	1.310	2	137	58639	2
	As	75	48.124	ug/L	0.684	1	267	74227	0
	As-1	75	48.456	ug/L	0.685	1	8149	82510	0
	Se	82	48.316	ug/L	0.418	0	-5	8080	0
	Se	78	49.379	ug/L	1.031	2	8278	29169	1
	Mo	98	43.992	ug/L	0.468	1	17	194359	0
	Y	89		ug/L			298590	285118	1
	Kr	83		ug/L			554	497	1
>	In	115		ug/L			979916	914653 ✓	1
	Ag	107	45.825	ug/L	0.786	1	15	584636	2
	Cd	111	51.074	ug/L	1.115	2	63	227403	1
	Cd	114	50.255	ug/L	0.373	0	30	556416	1
	Sb	121	50.817	ug/L	1.023	2	102	718236	0
	Sb	123	50.401	ug/L	1.077	2	72	545938	1
	Ba	135	50.858	ug/L	0.836	1	11	201681	0
	Ba	137	50.512	ug/L	1.379	2	17	345881	1
>	Tb	159		ug/L			1160798	1089830 ✓	0
	Tl	205	51.441	ug/L	0.276	0	51	1616139	0
	Pb	208	50.891	ug/L	0.418	0	139	2109517	0
	Bi	209		ug/L			2367270	2186484	0
	Th	232	51.048	ug/L	0.973	1	21	2018213	2
	U	238	52.240	ug/L	0.016	0	3	2100659	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:03:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	619987 ✓	0
[	Be	9	0.000	ug/L	0.001	417	5	5	39
	C	13		ug/L			58801	52087	4
	Cl	37		ug/L			3025336	3065436	1
[>	Sc	45		ug/L			671354	613071 ✓	0
[	V	51	0.025	ug/L	0.016	65	5156	5026	3
[	V-1	51	0.003	ug/L	0.000	9	130	153	2
[	Cr	52	0.084	ug/L	0.048	56	15247	14853	2
[	Cr	53	0.011	ug/L	0.006	55	115	120	7
[	Mn	55	0.004	ug/L	0.001	15	250	296	4
[	Co	59	0.001	ug/L	0.001	101	40	45	19
[>	Ge	72		ug/L			457613	435471 ✓	0
[	Ni	60	0.000	ug/L	0.002	3944	22	21	22
[	Ni	62	0.389	ug/L	0.019	4	29	172	3
[	Cu	63	0.024	ug/L	0.001	3	58	197	3
[	Cu	65	-0.000	ug/L	0.002	1731	28	27	16
[	Zn	66	-0.005	ug/L	0.002	38	143	128	2
[	Zn	67	0.017	ug/L	0.024	136	23	27	23
[	Zn	68	0.006	ug/L	0.015	265	137	136	12
[	As	75	-0.001	ug/L	0.018	1417	267	253	10
[	As-1	75	0.366	ug/L	0.108	29	8149	8292	0
[	Se	82	0.000	ug/L	0.041	26221	-5	-5	128
[	Se	78	1.335	ug/L	0.417	31	8278	8418	1
[	Mo	98	0.017	ug/L	0.005	33	17	86	26
	Y	89		ug/L			298590	280176	1
	Kr	83		ug/L			554	531	8
[>	In	115		ug/L			979916	903574 ✓	1
[	Ag	107	0.002	ug/L	0.000	7	15	44	4
[	Cd	111	0.006	ug/L	0.003	48	63	85	14
[	Cd	114	0.002	ug/L	0.001	29	30	50	13
[	Sb	121	0.078	ug/L	0.008	10	102	1185	10
[	Sb	123	0.079	ug/L	0.011	13	72	913	13
[	Ba	135	0.000	ug/L	0.001	255	11	11	19
[	Ba	137	0.000	ug/L	0.000	64	17	18	11
[>	Tb	159		ug/L			1160798	1049952 ✓	0
[	Tl	205	0.009	ug/L	0.003	39	51	310	33
[	Pb	208	0.001	ug/L	0.000	14	139	174	3
[	Bi	209		ug/L			2367270	2199190	0
[	Th	232	0.105	ug/L	0.016	15	21	4015	15
[	U	238	0.002	ug/L	0.000	12	3	72	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	634669	1
	Be	9	0.001	ug/L	0.001	52	5	7	19
	C	13		ug/L			58801	57096	0
	Cl	37		ug/L			3025336	3080979	1
>	Sc	45		ug/L			671354	621749	0
	V	51	0.041	ug/L	0.015	36	5156	5306	3
	V-1	51	0.002	ug/L	0.001	47	130	143	7
	Cr	52	0.126	ug/L	0.042	32	15247	15544	3
	Cr	53	-0.001	ug/L	0.007	509	115	105	8
	Mn	55	0.017	ug/L	0.001	4	250	490	2
	Co	59	0.001	ug/L	0.000	22	40	49	5
>	Ge	72		ug/L			457613	448808	2
	Ni	60	0.003	ug/L	0.005	202	22	29	47
	Ni	62	0.350	ug/L	0.037	10	29	162	6
	Cu	63	0.032	ug/L	0.004	11	58	254	7
	Cu	65	0.016	ug/L	0.001	7	28	71	4
	Zn	66	0.149	ug/L	0.008	5	143	382	5
	Zn	67	0.161	ug/L	0.039	24	23	66	18
	Zn	68	0.168	ug/L	0.017	10	137	330	4
	As	75	-0.026	ug/L	0.024	92	267	223	13
	As-1	75	0.282	ug/L	0.081	28	8149	8416	1
	Se	82	-0.048	ug/L	0.035	71	-5	-13	45
	Se	78	1.038	ug/L	0.267	25	8278	8551	1
	Mo	98	0.006	ug/L	0.002	36	17	40	19
	Y	89		ug/L			298590	289535	1
	Kr	83		ug/L			554	531	4
>	In	115		ug/L			979916	930087	1
	Ag	107	0.002	ug/L	0.000	17	15	34	9
	Cd	111	0.005	ug/L	0.002	50	63	80	11
	Cd	114	0.002	ug/L	0.000	21	30	46	7
	Sb	121	0.029	ug/L	0.004	13	102	519	10
	Sb	123	0.030	ug/L	0.004	14	72	399	12
	Ba	135	0.004	ug/L	0.001	30	11	28	17
	Ba	137	0.004	ug/L	0.000	12	17	41	7
>	Tb	159		ug/L			1160798	1076174	0
	Tl	205	0.007	ug/L	0.003	43	51	256	35
	Pb	208	0.002	ug/L	0.000	13	139	229	5
	Bi	209		ug/L			2367270	2231253	0
	Th	232	0.123	ug/L	0.026	20	21	4831	20
	U	238	0.001	ug/L	0.000	7	3	34	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	641814	1
[	Be	9	26.263	ug/L	0.843	3	5	52222	2
	C	13		ug/L			58801	53288	1
	Cl	37		ug/L			3025336	3055405	2
[>	Sc	45		ug/L			671354	630484	0
[	V	51	25.819	ug/L	0.241	0	5156	344883	1
[	V-1	51	25.904	ug/L	0.296	1	130	341042	2
[	Cr	52	26.456	ug/L	0.248	0	15247	316265	0
[	Cr	53	26.735	ug/L	0.265	0	115	34509	1
[	Mn	55	26.583	ug/L	0.132	0	250	418605	0
[	Co	59	26.248	ug/L	0.372	1	40	320697	1
[>	Ge	72		ug/L			457613	461330	0
[	Ni	60	25.874	ug/L	0.297	1	22	72351	0
[	Ni	62	26.080	ug/L	0.153	0	29	10277	0
[	Cu	63	26.070	ug/L	0.451	1	58	163710	1
[	Cu	65	26.015	ug/L	0.199	0	28	73815	1
[	Zn	66	81.720	ug/L	0.448	0	143	136715	0
[	Zn	67	77.963	ug/L	2.808	3	23	21261	4
[	Zn	68	78.751	ug/L	1.236	1	137	94803	1
[	As	75	24.716	ug/L	0.366	1	267	38775	1
[	As-1	75	24.876	ug/L	0.658	2	8149	46933	1
[	Se	82	78.606	ug/L	0.836	1	-5	13329	1
[	Se	78	79.212	ug/L	1.205	1	8278	42387	1
[	Mo	98	22.353	ug/L	0.066	0	17	100117	0
	Y	89		ug/L			298590	294680	2
	Kr	83		ug/L			554	511	5
[>	In	115		ug/L			979916	932376	2
[	Ag	107	24.217	ug/L	0.718	2	15	314797	0
[	Cd	111	25.109	ug/L	0.607	2	63	113967	0
[	Cd	114	25.528	ug/L	0.923	3	30	287983	1
[	Sb	121	25.405	ug/L	0.521	2	102	366028	0
[	Sb	123	25.135	ug/L	0.848	3	72	277466	1
[	Ba	135	26.346	ug/L	0.712	2	11	106473	0
[	Ba	137	25.758	ug/L	0.561	2	17	179781	0
[>	Tb	159		ug/L			1160798	1088396	1
[	Tl	205	27.441	ug/L	0.369	1	51	860919	0
[	Pb	208	27.177	ug/L	0.337	1	139	1125021	0
[	Bi	209		ug/L			2367270	2259344	0
[	Th	232	27.067	ug/L	0.548	2	21	1068581	1
[	U	238	27.065	ug/L	0.354	1	3	1086886	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~cr Mn, Ba~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	673538 ✓	1
	Be	**9**	**0.218**	ug/L	0.008	3	5	460	4
	C	**13**		ug/L			58801	58284	2
	Cl	**37**		ug/L			3025336	3079334	2
>	**Sc**	**45**		ug/L			671354	650187 ✓	1
	V	**51**	**6.992**	ug/L	0.042	0	5156	99953	1
	V-1	**51**	**7.024**	ug/L	0.052	0	130	95456	2
	Cr	**52**	**5.532**	ug/L	0.136	2	15247	79867	1
	Cr	**53**	**5.633**	ug/L	0.069	1	115	7586	2
	Mn	**55**	**186.614**	ug/L	1.028	0	250	3028956	1
	Co	**59**	**2.068**	ug/L	0.033	1	40	26088	1
>	**Ge**	**72**		ug/L			457613	465896 ✓	0
	Ni	**60**	**5.404**	ug/L	0.144	2	22	15279	2
	Ni	**62**	**5.587**	ug/L	0.067	1	29	2247	1
	Cu	**63**	**4.374**	ug/L	0.064	1	58	27785	1
	Cu	**65**	**4.409**	ug/L	0.037	0	28	12657	0
	Zn	**66**	**27.038**	ug/L	0.376	1	143	45778	1
	Zn	**67**	**30.940**	ug/L	0.700	2	23	8534	2
	Zn	**68**	**29.433**	ug/L	0.197	0	137	35871	0
	As	**75**	**2.424**	ug/L	0.048	1	267	4085	1
	As-1	**75**	**2.421**	ug/L	0.032	1	8149	12102	0
	Se	**82**	**0.047**	ug/L	0.108	228	-5	2	701
	Se	**78**	**0.026**	ug/L	0.062	235	8278	8440	0
	Mo	**98**	**0.083**	ug/L	0.002	2	17	390	2
	Y	**89**		ug/L			298590	322444	1
	Kr	**83**		ug/L			554	561	5
>	**In**	**115**		ug/L			979916	936450 ✓	1
	Ag	**107**	**0.039**	ug/L	0.004	10	15	529	8
	Cd	**111**	**0.208**	ug/L	0.008	3	63	1006	1
	Cd	**114**	**0.181**	ug/L	0.003	1	30	2077	1
	Sb	**121**	**0.042**	ug/L	0.004	10	102	708	7
	Sb	**123**	**0.039**	ug/L	0.005	12	72	501	8
	Ba	**135**	**85.653**	ug/L	1.840	2	11	347701	0
	Ba	**137**	**84.132**	ug/L	0.712	0	17	589864	0
>	**Tb**	**159**		ug/L			1160798	1111161 ✓	1
	Tl	**205**	**0.039**	ug/L	0.002	3	51	1313	4
	Pb	**208**	**10.359**	ug/L	0.181	1	139	437841	0
	Bi	**209**		ug/L			2367270	2245097	0
	Th	**232**	**1.168**	ug/L	0.076	6	21	47089	5
	U	**238**	**0.253**	ug/L	0.003	1	3	10395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT
RK Mn, Ba

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	672130	2
[	Be	9	1.016	ug/L	0.058	5	5	2118	3
	C	13		ug/L			58801	72062	3
	Cl	37		ug/L			3025336	3089820	2
[>	Sc	45		ug/L			671354	685586	1
[	V	51	33.349	ug/L	0.675	2	5156	482761	1
[	V-1	51	33.559	ug/L	0.632	1	130	480291	0
[	Cr	52	26.294	ug/L	0.627	2	15247	341857	1
[	Cr	53	26.965	ug/L	0.642	2	115	37840	1
[	Mn	55	875.615	ug/L	22.956	2	250	14982253	1
[	Co	59	9.816	ug/L	0.325	3	40	130408	2
[>	Ge	72		ug/L			457613	454915	0
[	Ni	60	26.090	ug/L	0.392	1	22	71942	1
[	Ni	62	28.941	ug/L	0.839	2	29	11242	2
[	Cu	63	21.319	ug/L	0.445	2	58	132024	2
[	Cu	65	22.099	ug/L	0.280	1	28	61838	1
[	Zn	66	130.811	ug/L	2.985	2	143	215724	2
[	Zn	67	150.801	ug/L	0.804	0	23	40527	1
[	Zn	68	144.061	ug/L	1.028	0	137	170908	0
[	As	75	12.009	ug/L	0.187	1	267	18714	1
[	As-1	75	12.105	ug/L	0.223	1	8149	26680	1
[	Se	82	~~-0.229~~	ug/L	0.092	40	-5	-43	35
[	Se	78	0.706	ug/L	0.235	33	8278	8529	1
[	Mo	98	0.359	ug/L	0.002	0	17	1600	0
	Y	89		ug/L			298590	440007	2
	Kr	83		ug/L			554	887	4
[>	In	115		ug/L			979916	933421	1
[	Ag	107	~~0.194~~	ug/L	0.006	2	15	2543	1
[	Cd	111	1.044	ug/L	0.035	3	63	4802	2
[	Cd	114	0.874	ug/L	0.012	1	30	9902	1
[	Sb	121	~~0.078~~	ug/L	0.002	2	102	1220	3
[	Sb	123	0.074	ug/L	0.002	3	72	891	3
[	Ba	135	430.813	ug/L	4.832	1	11	1743387	0
[	Ba	137	416.844	ug/L	4.701	1	17	2913016	0
[>	Tb	159		ug/L			1160798	1136635	1
[	Tl	205	~~0.171~~	ug/L	0.002	1	51	5654	1
[	Pb	208	50.482	ug/L	0.666	1	139	2182268	0
[	Bi	209		ug/L			2367270	2191684	0
[	Th	232	4.809	ug/L	0.021	0	21	198308	0
[	U	238	1.232	ug/L	0.013	1	3	51666	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:24:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ag, Mn, Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	681780	2
	Be	9	0.984	ug/L	0.044	4	5	2083	3
	C	13		ug/L			58801	71989	1
	Cl	37		ug/L			3025336	3106861	2
>	Sc	45		ug/L			671354	708845	0
	V	51	32.204	ug/L	0.435	1	5156	482266	1
	V-1	51	32.441	ug/L	0.438	1	130	480133	1
	Cr	52	29.573	ug/L	0.512	1	15247	395580	1
	Cr	53	30.344	ug/L	0.266	0	115	44018	1
	Mn	55	907.916	ug/L	8.268	0	250	16065415	0
	Co	59	9.492	ug/L	0.199	2	40	130423	2
>	Ge	72		ug/L			457613	455525	1
	Ni	60	32.368	ug/L	0.885	2	22	89353	1
	Ni	62	34.005	ug/L	0.285	0	29	13222	0
	Cu	63	21.709	ug/L	0.442	2	58	134587	0
	Cu	65	22.242	ug/L	0.374	1	28	62310	0
	Zn	66	130.736	ug/L	0.723	0	143	215868	0
	Zn	67	150.822	ug/L	3.545	2	23	40578	1
	Zn	68	141.740	ug/L	4.005	2	137	168349	1
	As	75	11.358	ug/L	0.129	1	267	17738	0
	As-1	75	11.434	ug/L	0.179	1	8149	25682	0
	Se	82	~~-0.258~~	ug/L	0.108	41	-5	-48	38
	Se	78	0.604	ug/L	0.301	49	8278	8496	1
	Mo	98	0.329	ug/L	0.032	9	17	1471	8
	Y	89		ug/L			298590	437201	0
	Kr	83		ug/L			554	888	6
>	In	115		ug/L			979916	933694	1
	Ag	107	~~0.190~~	ug/L	0.006	3	15	2489	2
	Cd	111	1.085	ug/L	0.034	3	63	4991	3
	Cd	114	0.889	ug/L	0.009	0	30	10080	0
	Sb	121	~~0.072~~	ug/L	0.003	3	102	1139	3
	Sb	123	0.071	ug/L	0.003	4	72	855	3
	Ba	135	420.311	ug/L	6.647	1	11	1701386	0
	Ba	137	406.648	ug/L	8.208	2	17	2842494	0
>	Tb	159		ug/L			1160798	1130467	1
	Tl	205	~~0.167~~	ug/L	0.005	2	51	5482	3
	Pb	208	48.463	ug/L	0.536	1	139	2083637	0
	Bi	209		ug/L			2367270	2180455	0
	Th	232	4.631	ug/L	0.088	1	21	189897	1
	U	238	1.224	ug/L	0.022	1	3	51053	0

ICP-MS Quantitative Analysis - Summary Report

~~CK MA BAT~~ 11-16-12 MJT

Sample ID: VR31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	670483	1
	Be	9	26.029	ug/L	0.308	1	5	54077	1
	C	13		ug/L			58801	71566	2
	Cl	37		ug/L			3025336	3092990	1
>	Sc	45		ug/L			671354	700272	2
	V	51	58.339	ug/L	0.744	1	5156	858558	1
	V-1	51	58.782	ug/L	0.820	1	130	859142	1
	Cr	52	47.711	ug/L	1.369	2	15247	620458	0
	Cr	53	49.135	ug/L	1.696	3	115	70298	0
	Mn	55	888.814	ug/L	41.923	4	250	15524293	2
	Co	59	32.325	ug/L	0.741	2	40	438556	1
>	Ge	72		ug/L			457613	447621	3
	Ni	60	50.592	ug/L	2.634	5	22	137074	1
	Ni	62	52.436	ug/L	2.669	5	29	19996	2
	Cu	63	47.659	ug/L	2.501	5	58	289946	1
	Cu	65	48.932	ug/L	3.126	6	28	134470	2
	Zn	66	216.103	ug/L	8.958	4	143	350212	1
	Zn	67	230.839	ug/L	6.949	3	23	60987	1
	Zn	68	222.531	ug/L	11.257	5	137	259364	1
	As	75	35.810	ug/L	1.919	5	267	54321	1
	As-1	75	36.172	ug/L	2.157	5	8149	62518	1
	Se	82	74.015	ug/L	3.614	4	-5	12162	1
	Se	78	76.044	ug/L	4.571	6	8278	39759	0
	Mo	98	20.222	ug/L	0.770	3	17	87798	0
	Y	89		ug/L			298590	440169	0
	Kr	83		ug/L			554	886	0
>	In	115		ug/L			979916	929357	2
	Ag	107	21.758	ug/L	0.258	1	15	282010	1
	Cd	111	25.458	ug/L	0.295	1	63	115201	1
	Cd	114	25.195	ug/L	0.560	2	30	283383	1
	Sb	121	1.163	ug/L	0.028	2	102	16789	2
	Sb	123	1.172	ug/L	0.022	1	72	12968	2
	Ba	135	439.976	ug/L	13.241	3	11	1772126	0
	Ba	137	425.149	ug/L	11.956	2	17	2957229	0
>	Tb	159		ug/L			1160798	1120422	1
	Tl	205	24.866	ug/L	0.313	1	51	803083	0
	Pb	208	78.670	ug/L	1.287	1	139	3351967	0
	Bi	209		ug/L			2367270	2134960	1
	Th	232	29.613	ug/L	0.477	1	21	1203423	0
	U	238	27.278	ug/L	0.529	1	3	1127476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 APOST SWN

Sb

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, November 15, 2012 14:32:31

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	674945	1
	Be	9	23.537	ug/L	0.839	3	5	49224	3
	C	13		ug/L			58801	74723	2
	Cl	37		ug/L			3025336	3106433	1
>	Sc	45		ug/L			671354	707054	2
	V	51	52.713	ug/L	0.094	0	5156	783934	2
	V-1	51	53.034	ug/L	0.311	0	130	782761	1
	Cr	52	45.462	ug/L	1.251	2	15247	597736	0
	Cr	53	46.495	ug/L	2.034	4	115	67169	2
	Mn	55	874.289	ug/L	23.988	2	250	15425904	1
	Co	59	30.677	ug/L	1.207	3	40	420119	2
>	Ge	72		ug/L			457613	450971	1
	Ni	60	49.136	ug/L	0.364	0	22	134307	2
	Ni	62	50.430	ug/L	0.549	1	29	19399	1
	Cu	63	43.996	ug/L	1.140	2	58	270004	2
	Cu	65	44.543	ug/L	0.887	1	28	123535	2
	Zn	66	200.025	ug/L	8.135	4	143	326783	2
	Zn	67	220.831	ug/L	1.481	0	23	58825	2
	Zn	68	213.785	ug/L	4.968	2	137	251309	1
	As	75	34.560	ug/L	0.509	1	267	52891	0
	As-1	75	34.457	ug/L	0.588	1	8149	60453	0
	Se	82	69.700	ug/L	1.283	1	-5	11552	1
	Se	78	69.970	ug/L	1.647	2	8278	37551	1
	Mo	98	20.897	ug/L	0.741	3	17	91470	2
	Y	89		ug/L			298590	448291	0
	Kr	83		ug/L			554	855	1
>	In	115		ug/L			979916	910154	0
	Ag	107	20.863	ug/L	0.635	3	15	264818	2
	Cd	111	23.674	ug/L	1.007	4	63	104914	3
	Cd	114	23.622	ug/L	0.783	3	30	260227	2
	Sb	121	22.439	ug/L	0.751	3	102	315653	3
	Sb	123	22.038	ug/L	0.456	2	72	237584	1
	Ba	135	468.132	ug/L	5.727	1	11	1847256	0
	Ba	137	448.936	ug/L	2.569	0	17	3059485	1
>	Tb	159		ug/L			1160798	1130035	0
	Tl	205	22.921	ug/L	0.648	2	51	746656	2
	Pb	208	72.890	ug/L	0.790	1	139	3132803	0
	Bi	209		ug/L			2367270	2149611	0
	Th	232	27.504	ug/L	0.622	2	21	1127427	1
	U	238	24.154	ug/L	0.755	3	3	1007011	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	698329	2
[	Be	9	0.623	ug/L	0.034	5	5	1353	4
	C	13		ug/L			58801	78455	1
	Cl	37		ug/L			3025336	3160350	1
[>	Sc	45		ug/L			671354	716170	1
[	V	51	34.020	ug/L	0.919	2	5156	514298	1
[	V-1	51	34.234	ug/L	0.763	2	130	511776	1
[	Cr	52	31.894	ug/L	0.597	1	15247	429684	0
[	Cr	53	32.587	ug/L	0.233	0	115	47748	1
[	Mn	55	1063.232	ug/L	28.748	2	250	19002631	1
[	Co	59	8.605	ug/L	0.162	1	40	119440	0
[>	Ge	72		ug/L			457613	456126	1
[	Ni	60	20.904	ug/L	0.185	0	22	57806	1
[	Ni	62	22.903	ug/L	0.461	2	29	8927	1
[	Cu	63	17.626	ug/L	0.087	0	58	109446	0
[	Cu	65	18.048	ug/L	0.413	2	28	50633	1
[	Zn	66	256.240	ug/L	7.636	2	143	423455	2
[	Zn	67	257.678	ug/L	4.340	1	23	69408	0
[	Zn	68	258.967	ug/L	4.660	1	137	307906	1
[	As	75	12.264	ug/L	0.089	0	267	19156	0
[	As-1	75	12.348	ug/L	0.179	1	8149	27123	0
[	Se	82	-0.148	ug/L	0.019	12	-5	-30	9
[	Se	78	0.494	ug/L	0.341	68	8278	8460	0
[	Mo	98	0.503	ug/L	0.005	0	17	2246	1
	Y	89		ug/L			298590	376488	1
	Kr	83		ug/L			554	755	0
[>	In	115		ug/L			979916	944639	0
[	Ag	107	0.140	ug/L	0.006	4	15	1857	3
[	Cd	111	2.156	ug/L	0.013	0	63	9974	1
[	Cd	114	2.032	ug/L	0.024	1	30	23264	1
[	Sb	121	0.143	ug/L	0.007	4	102	2184	5
[	Sb	123	0.134	ug/L	0.008	5	72	1563	5
[	Ba	135	347.645	ug/L	4.971	1	11	1423873	1
[	Ba	137	341.216	ug/L	0.681	0	17	2413434	0
[>	Tb	159		ug/L			1160798	1130115	0
[	Tl	205	0.171	ug/L	0.002	0	51	5624	0
[	Pb	208	87.202	ug/L	0.093	0	139	3748211	0
[	Bi	209		ug/L			2367270	2210582	0
[	Th	232	6.039	ug/L	0.062	1	21	247579	1
[	U	238	0.757	ug/L	0.007	0	3	31556	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:41:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AF MH~~ 11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	679526	1
[	Be	9	0.422	ug/L	0.028	6	5	893	5
	C	13		ug/L			58801	77609	2
	Cl	37		ug/L			3025336	3126148	0
[>	Sc	45		ug/L			671354	689327	0
[	V	51	28.455	ug/L	0.535	1	5156	414965	1
[	V-1	51	28.609	ug/L	0.550	1	130	411726	1
[	Cr	52	24.742	ug/L	0.264	1	15247	324384	0
[	Cr	53	25.238	ug/L	0.346	1	115	35619	0
[	Mn	55	633.499	ug/L	8.576	1	250	10900767	1
[	Co	59	6.300	ug/L	0.127	2	40	84185	1
[>	Ge	72		ug/L			457613	465963	1
[	Ni	60	14.726	ug/L	0.521	3	22	41590	2
[	Ni	62	15.883	ug/L	0.581	3	29	6333	3
[	Cu	63	12.043	ug/L	0.364	3	58	76398	2
[	Cu	65	12.506	ug/L	0.183	1	28	35852	0
[	Zn	66	138.331	ug/L	1.351	0	143	233626	0
[	Zn	67	142.198	ug/L	1.014	0	23	39141	0
[	Zn	68	140.902	ug/L	2.519	1	137	171195	0
[	As	75	10.361	ug/L	0.129	1	267	16574	0
[	As-1	75	10.391	ug/L	0.173	1	8149	24632	0
[	Se	82	< 0.035	ug/L	0.002	6	-5	0	68
[	Se	78	0.237	ug/L	0.168	70	8278	8531	0
[	Mo	98	0.435	ug/L	0.016	3	17	1983	2
	Y	89		ug/L			298590	352227	1
	Kr	83		ug/L			554	632	2
[>	In	115		ug/L			979916	955334	1
[	Ag	107	< 0.076	ug/L	0.003	3	15	1020	3
[	Cd	111	1.710	ug/L	0.010	0	63	8014	0
[	Cd	114	1.671	ug/L	0.015	0	30	19349	0
[	Sb	121	< 0.081	ug/L	0.002	2	102	1289	3
[	Sb	123	0.078	ug/L	0.005	6	72	953	4
[	Ba	135	213.483	ug/L	2.849	1	11	884189	0
[	Ba	137	214.617	ug/L	4.197	1	17	1534917	0
[>	Tb	159		ug/L			1160798	1115462	1
[	Tl	205	< 0.130	ug/L	0.001	0	51	4231	1
[	Pb	208	47.375	ug/L	0.749	1	139	2009688	0
[	Bi	209		ug/L			2367270	2207211	0
[	Th	232	5.264	ug/L	0.097	1	21	212969	0
[	U	238	0.558	ug/L	0.007	1	3	22949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn Ba~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	675572	1
[	Be	9	0.550	ug/L	0.013	2	5	1156	1
	C	13		ug/L			58801	77971	2
	Cl	37		ug/L			3025336	3147081	1
[>	Sc	45		ug/L			671354	703172	1
[	V	51	32.062	ug/L	0.406	1	5156	476269	1
[	V-1	51	32.326	ug/L	0.546	1	130	474503	1
[	Cr	52	27.375	ug/L	0.142	0	15247	364415	1
[	Cr	53	28.226	ug/L	0.734	2	115	40614	0
[	Mn	55	594.130	ug/L	7.263	1	250	10428099	1
[	Co	59	8.850	ug/L	0.146	1	40	120617	1
[>	Ge	72		ug/L			457613	455730	0
[	Ni	60	19.151	ug/L	0.263	1	22	52909	0
[	Ni	62	20.529	ug/L	0.421	2	29	7998	1
[	Cu	63	16.035	ug/L	0.314	1	58	99490	1
[	Cu	65	16.391	ug/L	0.437	2	28	45954	2
[	Zn	66	144.591	ug/L	2.035	1	143	238843	1
[	Zn	67	159.247	ug/L	2.659	1	23	42871	1
[	Zn	68	152.140	ug/L	1.222	0	137	180806	0
[	As	75	9.950	ug/L	0.191	1	267	15579	1
[	As-1	75	10.097	ug/L	0.203	2	8149	23640	0
[	Se	82	-0.183	ug/L	0.030	16	-5	-35	13
[	Se	78	0.703	ug/L	0.159	22	8278	8543	0
[	Mo	98	0.419	ug/L	0.009	2	17	1869	1
	Y	89		ug/L			298590	365735	0
	Kr	83		ug/L			554	759	3
[>	In	115		ug/L			979916	933523	0
[	Ag	107	0.142	ug/L	0.007	5	15	1863	4
[	Cd	111	0.776	ug/L	0.023	2	63	3586	2
[	Cd	114	0.702	ug/L	0.005	0	30	7967	1
[	Sb	121	0.045	ug/L	0.005	10	102	749	8
[	Sb	123	0.044	ug/L	0.005	11	72	550	10
[	Ba	135	351.617	ug/L	2.178	0	11	1423244	1
[	Ba	137	344.317	ug/L	2.932	0	17	2406621	0
[>	Tb	159		ug/L			1160798	1120669	0
[	Tl	205	0.134	ug/L	0.001	0	51	4373	0
[	Pb	208	29.457	ug/L	0.101	0	139	1255687	0
[	Bi	209		ug/L			2367270	2172168	0
[	Th	232	6.167	ug/L	0.020	0	21	250714	0
[	U	238	0.796	ug/L	0.001	0	3	32916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	653054	1
[	Be	9	50.935	ug/L	0.279	0	5	103070	1
	C	13		ug/L			58801	55254	0
	Cl	37		ug/L			3025336	3246034	3
[>	Sc	45		ug/L			671354	626960	0
[	V	51	49.795	ug/L	0.110	0	5156	656929	0
[	V-1	51	49.884	ug/L	0.231	0	130	652932	0
[	Cr	52	50.578	ug/L	0.307	0	15247	588304	0
[	Cr	53	50.871	ug/L	0.814	1	115	65200	1
[	Mn	55	50.110	ug/L	0.318	0	250	784487	0
[	Co	59	50.996	ug/L	1.214	2	40	619523	1
[>	Ge	72		ug/L			457613	443132	1
[	Ni	60	49.433	ug/L	1.488	3	22	132720	1
[	Ni	62	50.141	ug/L	1.281	2	29	18948	1
[	Cu	63	50.664	ug/L	1.762	3	58	305416	1
[	Cu	65	50.750	ug/L	0.599	1	28	138271	0
[	Zn	66	50.872	ug/L	1.308	2	143	81777	0
[	Zn	67	52.294	ug/L	0.855	1	23	13702	1
[	Zn	68	50.542	ug/L	1.778	3	137	58471	1
[	As	75	49.700	ug/L	0.885	1	267	74621	0
[	As-1	75	50.125	ug/L	1.089	2	8149	82817	0
[	Se	82	50.158	ug/L	0.754	1	-5	8166	0
[	Se	78	51.653	ug/L	1.517	2	8278	29332	0
[	Mo	98	47.489	ug/L	0.999	2	17	204259	1
	Y	89		ug/L			298590	290226	1
	Kr	83		ug/L			554	535	3
[>	In	115		ug/L			979916	917463	0
[	Ag	107	47.357	ug/L	1.257	2	15	605947	2
[	Cd	111	50.402	ug/L	0.091	0	63	225139	0
[	Cd	114	50.757	ug/L	0.721	1	30	563681	0
[	Sb	121	50.960	ug/L	0.237	0	102	722571	0
[	Sb	123	50.197	ug/L	0.690	1	72	545445	0
[	Ba	135	50.266	ug/L	1.072	2	11	199954	1
[	Ba	137	50.190	ug/L	0.680	1	17	344786	1
[>	Tb	159		ug/L			1160798	1065657	0
[	Tl	205	52.641	ug/L	0.397	0	51	1617129	0
[	Pb	208	51.463	ug/L	0.183	0	139	2085946	0
[	Bi	209		ug/L			2367270	2151419	0
[	Th	232	52.614	ug/L	0.287	0	21	2033951	0
[	U	238	53.008	ug/L	0.660	1	3	2084247	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 14:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	638148	0
	Be	9	0.001	ug/L	0.002	155	5	7	54
	C	13		ug/L			58801	54689	3
	Cl	37		ug/L			3025336	3047486	1
>	Sc	45		ug/L			671354	617720	0
	V	51	0.020	ug/L	0.003	14	5156	5007	1
	V-1	51	-0.002	ug/L	0.002	99	130	97	23
	Cr	52	0.062	ug/L	0.002	3	15247	14722	0
	Cr	53	-0.010	ug/L	0.004	35	115	93	4
	Mn	55	0.014	ug/L	0.002	18	250	441	9
	Co	59	0.001	ug/L	0.001	57	40	49	15
>	Ge	72		ug/L			457613	446360	1
	Ni	60	-0.001	ug/L	0.003	234	22	19	39
	Ni	62	0.143	ug/L	0.036	24	29	83	15
	Cu	63	0.009	ug/L	0.001	6	58	113	2
	Cu	65	0.002	ug/L	0.002	130	28	33	18
	Zn	66	-0.007	ug/L	0.007	107	143	128	9
	Zn	67	-0.003	ug/L	0.018	641	23	22	20
	Zn	68	-0.006	ug/L	0.004	63	137	126	2
	As	75	-0.006	ug/L	0.009	141	267	251	5
	As-1	75	0.282	ug/L	0.051	18	8149	8373	0
	Se	82	-0.028	ug/L	0.024	84	-5	-9	39
	Se	78	1.033	ug/L	0.209	20	8278	8504	0
	Mo	98	0.011	ug/L	0.002	21	17	64	15
	Y	89		ug/L			298590	281163	1
	Kr	83		ug/L			554	550	5
>	In	115		ug/L			979916	926226	0
	Ag	107	0.003	ug/L	0.001	48	15	47	33
	Cd	111	0.005	ug/L	0.001	17	63	82	5
	Cd	114	0.001	ug/L	0.001	81	30	45	30
	Sb	121	0.057	ug/L	0.004	7	102	913	6
	Sb	123	0.062	ug/L	0.004	6	72	745	5
	Ba	135	0.004	ug/L	0.002	44	11	28	26
	Ba	137	0.006	ug/L	0.003	48	17	54	34
>	Tb	159		ug/L			1160798	1035087	0
	Tl	205	0.007	ug/L	0.002	37	51	242	29
	Pb	208	0.002	ug/L	0.000	16	139	207	6
	Bi	209		ug/L			2367270	2178604	0
	Th	232	0.082	ug/L	0.011	12	21	3089	13
	U	238	0.001	ug/L	0.000	13	3	58	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:15:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJT
Mn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	669406	0
	Be	9	0.407	ug/L	0.012	2	5	848	2
	C	13		ug/L			58801	80581	2
	Cl	37		ug/L			3025336	3193936	2
>	Sc	45		ug/L			671354	683285	0
	V	51	35.887	ug/L	0.251	0	5156	517430	0
	V-1	51	36.082	ug/L	0.246	0	130	514727	0
	Cr	52	21.298	ug/L	0.311	1	15247	278958	0
	Cr	53	21.901	ug/L	0.451	2	115	30657	2
	Mn	55	329.072	ug/L	3.730	1	250	5613192	1
	Co	59	7.080	ug/L	0.204	2	40	93768	2
>	Ge	72		ug/L			457613	455954	0
	Ni	60	15.809	ug/L	0.272	1	22	43704	2
	Ni	62	17.308	ug/L	0.370	2	29	6751	2
	Cu	63	20.220	ug/L	0.031	0	58	125500	0
	Cu	65	20.890	ug/L	0.754	3	28	58592	3
	Zn	66	108.758	ug/L	1.460	1	143	179787	1
	Zn	67	108.959	ug/L	0.867	0	23	29354	0
	Zn	68	108.184	ug/L	1.985	1	137	128679	2
	As	75	7.705	ug/L	0.089	1	267	12132	1
	As-1	75	7.849	ug/L	0.055	0	8149	20194	0
	Se	82	0.414	ug/L	0.043	10	-5	64	10
	Se	78	1.044	ug/L	0.214	20	8278	8691	0
	Mo	98	0.459	ug/L	0.011	2	17	2048	1
	Y	89		ug/L			298590	400196	1
	Kr	83		ug/L			554	625	2
>	In	115		ug/L			979916	930629	0
	Ag	107	0.157	ug/L	0.002	1	15	2056	1
	Cd	111	1.489	ug/L	0.020	1	63	6806	1
	Cd	114	1.440	ug/L	0.020	1	30	16254	1
	Sb	121	0.113	ug/L	0.005	4	102	1716	4
	Sb	123	0.114	ug/L	0.009	7	72	1327	7
	Ba	135	82.352	ug/L	0.496	0	11	332298	0
	Ba	137	81.904	ug/L	0.850	1	17	570729	1
>	Tb	159		ug/L			1160798	1100079	1
	Tl	205	0.137	ug/L	0.004	3	51	4382	2
	Pb	208	72.029	ug/L	0.789	1	139	3013558	1
	Bi	209		ug/L			2367270	2170815	0
	Th	232	4.886	ug/L	0.098	1	21	194989	1
	U	238	2.901	ug/L	0.038	1	3	117734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:19:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~KK MM~~ 11.16.12 MM

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			726304	669174	2
[	**Be**	**9**	**0.680**	ug/L	0.002	0	5	1415	2
	C	**13**		ug/L			58801	70255	3
	Cl	**37**		ug/L			3025336	3104801	1
[>	**Sc**	**45**		ug/L			671354	700996	0
[	**V**	**51**	**37.182**	ug/L	1.136	3	5156	549741	2
[	**V-1**	**51**	**37.576**	ug/L	1.008	2	130	549876	1
[	**Cr**	**52**	**29.206**	ug/L	0.908	3	15247	386501	2
[	**Cr**	**53**	**30.477**	ug/L	0.725	2	115	43717	1
[	**Mn**	**55**	**523.625**	ug/L	1.065	0	250	9162946	0
[	**Co**	**59**	**8.756**	ug/L	0.220	2	40	118974	2
[>	**Ge**	**72**		ug/L			457613	451392	1
[	**Ni**	**60**	**24.045**	ug/L	0.747	3	22	65780	2
[	**Ni**	**62**	**25.669**	ug/L	0.712	2	29	9896	1
[	**Cu**	**63**	**22.795**	ug/L	0.366	1	58	140050	1
[	**Cu**	**65**	**23.468**	ug/L	0.311	1	28	65150	0
[	**Zn**	**66**	**122.207**	ug/L	4.215	3	143	199922	2
[	**Zn**	**67**	**136.089**	ug/L	4.558	3	23	36282	2
[	**Zn**	**68**	**130.021**	ug/L	3.751	2	137	153037	1
[	**As**	**75**	**9.811**	ug/L	0.105	1	267	15218	0
[	**As-1**	**75**	**9.965**	ug/L	0.182	1	8149	23214	0
[	**Se**	**82**	**-0.163**	ug/L	0.058	35	-5	-32	28
[	**Se**	**78**	**0.820**	ug/L	0.289	35	8278	8510	0
[	**Mo**	**98**	**0.375**	ug/L	0.017	4	17	1660	4
	Y	**89**		ug/L			298590	371868	1
	Kr	**83**		ug/L			554	789	1
[>	**In**	**115**		ug/L			979916	924672	0
[	**Ag**	**107**	**0.132**	ug/L	0.001	1	15	1718	1
[	**Cd**	**111**	**0.775**	ug/L	0.020	2	63	3546	2
[	**Cd**	**114**	**0.684**	ug/L	0.020	2	30	7680	2
[	**Sb**	**121**	**0.036**	ug/L	0.002	5	102	608	3
[	**Sb**	**123**	**0.032**	ug/L	0.005	14	72	418	11
[	**Ba**	**135**	**298.166**	ug/L	6.317	2	11	1195360	1
[	**Ba**	**137**	**292.927**	ug/L	3.240	1	17	2028058	0
[>	**Tb**	**159**		ug/L			1160798	1096148	1
[	**Tl**	**205**	**-0.142**	ug/L	0.002	1	51	4546	2
[	**Pb**	**208**	**31.727**	ug/L	0.426	1	139	1322698	0
[	**Bi**	**209**		ug/L			2367270	2152836	0
[	**Th**	**232**	**8.735**	ug/L	0.049	0	21	347366	1
[	**U**	**238**	**0.914**	ug/L	0.009	0	3	36970	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:24:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	657743	1
	Be	9	0.507	ug/L	0.033	6	5	1037	4
	C	13		ug/L			58801	76553	3
	Cl	37		ug/L			3025336	3137143	1
>	Sc	45		ug/L			671354	685808	1
	V	51	17.329	ug/L	0.328	1	5156	253482	1
	V-1	51	17.346	ug/L	0.317	1	130	248413	1
	Cr	52	15.116	ug/L	0.170	1	15247	203231	1
	Cr	53	15.167	ug/L	0.140	0	115	21344	1
	Mn	55	667.237	ug/L	18.091	2	250	11420270	1
	Co	59	5.260	ug/L	0.164	3	40	69955	4
>	Ge	72		ug/L			457613	456304	2
	Ni	60	14.100	ug/L	0.124	0	22	39006	2
	Ni	62	15.289	ug/L	0.571	3	29	5968	1
	Cu	63	11.816	ug/L	0.138	1	58	73403	1
	Cu	65	12.204	ug/L	0.355	2	28	34249	1
	Zn	66	128.498	ug/L	4.057	3	143	212455	1
	Zn	67	139.135	ug/L	4.668	3	23	37485	0
	Zn	68	137.508	ug/L	6.747	4	137	163512	2
	As	75	8.079	ug/L	0.230	2	267	12711	1
	As-1	75	8.199	ug/L	0.400	4	8149	20738	0
	Se	82	-0.106	ug/L	0.080	75	-5	-23	60
	Se	78	0.566	ug/L	0.704	124	8278	8490	0
	Mo	98	0.340	ug/L	0.016	4	17	1523	2
	Y	89		ug/L			298590	383551	3
	Kr	83		ug/L			554	696	3
>	In	115		ug/L			979916	945372	0
	Ag	107	0.087	ug/L	0.003	3	15	1160	3
	Cd	111	1.873	ug/L	0.025	1	63	8677	1
	Cd	114	1.797	ug/L	0.047	2	30	20592	2
	Sb	121	0.073	ug/L	0.002	2	102	1162	2
	Sb	123	0.074	ug/L	0.004	4	72	903	4
	Ba	135	288.873	ug/L	1.308	0	11	1184091	0
	Ba	137	280.728	ug/L	1.889	0	17	1987154	0
>	Tb	159		ug/L			1160798	1119393	0
	Tl	205	-0.146	ug/L	0.003	2	51	4753	2
	Pb	208	106.225	ug/L	0.593	0	139	4522433	0
	Bi	209		ug/L			2367270	2183517	0
	Th	232	4.535	ug/L	0.012	0	21	184151	0
	U	238	0.575	ug/L	0.013	2	3	23754	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:28:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn Pb Zn
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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	660277	1
	Be	9	0.123	ug/L	0.008	6	5	257	5
	C	13		ug/L			58801	63435	0
	Cl	37		ug/L			3025336	3067991	4
>	Sc	45		ug/L			671354	662027	1
	V	51	5.902	ug/L	0.083	1	5156	86689	1
	V-1	51	6.017	ug/L	0.092	1	130	83258	0
	Cr	52	10.575	ug/L	0.191	1	15247	141756	0
	Cr	53	10.963	ug/L	0.304	2	115	14921	1
	Mn	55	139.939	ug/L	1.097	0	250	2312815	1
	Co	59	2.113	ug/L	0.057	2	40	27145	1
>	Ge	72		ug/L			457613	449855	1
	Ni	60	5.476	ug/L	0.094	1	22	14948	0
	Ni	62	5.912	ug/L	0.180	3	29	2294	4
	Cu	63	6.348	ug/L	0.157	2	58	38914	2
	Cu	65	6.577	ug/L	0.087	1	28	18218	1
	Zn	66	114.834	ug/L	4.549	3	143	187227	2
	Zn	67	108.058	ug/L	1.654	1	23	28723	1
	Zn	68	111.601	ug/L	3.758	3	137	130930	2
	As	75	4.779	ug/L	0.054	1	267	7523	1
	As-1	75	5.014	ug/L	0.169	3	8149	15620	0
	Se	82	0.078	ug/L	0.022	27	-5	7	47
	Se	78	0.941	ug/L	0.446	47	8278	8531	1
	Mo	98	0.083	ug/L	0.006	7	17	377	7
	Y	89		ug/L			298590	324782	0
	Kr	83		ug/L			554	560	2
>	In	115		ug/L			979916	934916	1
	Ag	107	0.057	ug/L	0.002	3	15	760	3
	Cd	111	2.931	ug/L	0.051	1	63	13398	1
	Cd	114	2.948	ug/L	0.061	2	30	33380	0
	Sb	121	0.053	ug/L	0.000	0	102	856	1
	Sb	123	0.054	ug/L	0.004	8	72	665	8
	Ba	135	43.224	ug/L	0.522	1	11	175226	1
	Ba	137	42.392	ug/L	0.102	0	17	296765	0
>	Tb	159		ug/L			1160798	1072424	0
	Tl	205	0.111	ug/L	0.001	0	51	3477	1
	Pb	208	84.415	ug/L	0.475	0	139	3443084	0
	Bi	209		ug/L			2367270	2206189	0
	Th	232	1.240	ug/L	0.010	0	21	48239	0
	U	238	0.166	ug/L	0.003	1	3	6578	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:32:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	665866	0
	Be	9	0.564	ug/L	0.003	0	5	1168	0
	C	13		ug/L			58801	86475	4
	Cl	37		ug/L			3025336	3153528	0
>	Sc	45		ug/L			671354	705952	0
	V	51	28.815	ug/L	0.566	1	5156	430315	1
	V-1	51	29.088	ug/L	0.289	0	130	428742	0
	Cr	52	50.609	ug/L	1.449	2	15247	662765	2
	Cr	53	51.554	ug/L	1.592	3	115	74389	2
	Mn	55	644.019	ug/L	8.250	1	250	11348910	0
	Co	59	9.783	ug/L	0.085	0	40	133878	1
>	Ge	72		ug/L			457613	449480	0
	Ni	60	27.394	ug/L	0.094	0	22	74637	0
	Ni	62	29.370	ug/L	1.047	3	29	11273	3
	Cu	63	31.639	ug/L	0.429	1	58	193560	1
	Cu	65	32.121	ug/L	0.736	2	28	88797	2
	Zn	66	550.649	ug/L	8.791	1	143	896736	1
	Zn	67	524.104	ug/L	4.641	0	23	139110	1
	Zn	68	544.587	ug/L	8.982	1	137	637972	1
	As	75	23.702	ug/L	0.270	1	267	36241	1
	As-1	75	23.922	ug/L	0.302	1	8149	44284	1
	Se	82	0.176	ug/L	0.105	59	-5	23	72
	Se	78	1.244	ug/L	0.173	13	8278	8652	0
	Mo	98	0.425	ug/L	0.017	3	17	1870	3
	Y	89		ug/L			298590	439800	0
	Kr	83		ug/L			554	728	3
>	In	115		ug/L			979916	978306	1
	Ag	107	0.250	ug/L	0.010	4	15	3429	3
	Cd	111	13.687	ug/L	0.071	0	63	65234	0
	Cd	114	13.694	ug/L	0.178	1	30	162189	0
	Sb	121	0.245	ug/L	0.010	3	102	3806	2
	Sb	123	0.238	ug/L	0.005	1	72	2832	1
	Ba	135	208.286	ug/L	5.230	2	11	883366	1
	Ba	137	207.928	ug/L	3.046	1	17	1522968	0
>	Tb	159		ug/L			1160798	1122794	0
	Tl	205	0.522	ug/L	0.008	1	51	16955	1
	Pb	208	390.055	ug/L	2.097	0	139	16656267	0
	Bi	209		ug/L			2367270	2197146	0
	Th	232	5.886	ug/L	0.058	0	21	239765	0
	U	238	0.802	ug/L	0.005	0	3	33236	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:36:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Mn 11.16.12 MD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	682210	1
	Be	9	0.946	ug/L	0.036	3	5	2003	2
	C	13		ug/L			58801	88206	3
	Cl	37		ug/L			3025336	3220928	1
>	Sc	45		ug/L			671354	714096	1
	V	51	28.808	ug/L	0.700	2	5156	435110	1
	V-1	51	28.997	ug/L	0.762	2	130	432258	1
	Cr	52	28.944	ug/L	0.532	1	15247	390315	0
	Cr	53	29.561	ug/L	0.615	2	115	43193	0
	Mn	55	1267.402	ug/L	30.160	2	250	22588239	1
	Co	59	17.782	ug/L	0.060	0	40	246102	1
>	Ge	72		ug/L			457613	455857	0
	Ni	60	41.561	ug/L	0.607	1	22	114833	1
	Ni	62	43.462	ug/L	0.815	1	29	16904	1
	Cu	63	34.594	ug/L	0.774	2	58	214645	2
	Cu	65	35.502	ug/L	0.285	0	28	99528	1
	Zn	66	189.077	ug/L	0.787	0	143	312378	0
	Zn	67	196.555	ug/L	3.707	1	23	52923	1
	Zn	68	199.365	ug/L	5.140	2	137	236945	2
	As	75	17.851	ug/L	0.052	0	267	27747	0
	As-1	75	17.977	ug/L	0.026	0	8149	35768	0
	Se	82	u -0.016	ug/L	0.026	157	-5	-8	53
	Se	78	0.951	ug/L	0.108	11	8278	8651	0
	Mo	98	1.116	ug/L	0.014	1	17	4956	0
	Y	89		ug/L			298590	491114	1
	Kr	83		ug/L			554	858	2
>	In	115		ug/L			979916	934135	2
	Ag	107	u 0.186	ug/L	0.007	3	15	2440	3
	Cd	111	3.351	ug/L	0.084	2	63	15288	0
	Cd	114	3.182	ug/L	0.054	1	30	36003	0
	Sb	121	u 0.130	ug/L	0.005	3	102	1977	1
	Sb	123	0.135	ug/L	0.004	3	72	1556	1
	Ba	135	248.316	ug/L	8.423	3	11	1005223	1
	Ba	137	249.377	ug/L	4.231	1	17	1743825	1
>	Tb	159		ug/L			1160798	1122418	2
	Tl	205	0.236	ug/L	0.010	4	51	7668	1
	Pb	208	106.027	ug/L	3.003	2	139	4524052	0
	Bi	209		ug/L			2367270	2143333	1
	Th	232	7.142	ug/L	0.123	1	21	290753	1
	U	238	1.081	ug/L	0.033	3	3	44751	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:42:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~TT Mn~~
11.16.12 MJJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	654111	1
	Be	9	0.564	ug/L	0.019	3	5	1148	1
	C	13		ug/L			58801	77009	2
	Cl	37		ug/L			3025336	3032412	1
>	Sc	45		ug/L			671354	695448	1
	V	51	30.830	ug/L	1.145	3	5156	453066	2
	V-1	51	30.859	ug/L	1.219	3	130	447937	2
	Cr	52	17.705	ug/L	0.178	1	15247	238676	0
	Cr	53	17.765	ug/L	0.332	1	115	25330	0
	Mn	55	863.901	ug/L	23.840	2	250	14994078	1
	Co	59	7.032	ug/L	0.257	3	40	94793	3
>	Ge	72		ug/L			457613	456027	0
	Ni	60	13.888	ug/L	0.152	1	22	38399	0
	Ni	62	15.079	ug/L	0.504	3	29	5886	3
	Cu	63	12.199	ug/L	0.323	2	58	75746	2
	Cu	65	12.739	ug/L	0.236	1	28	35747	2
	Zn	66	184.237	ug/L	6.900	3	143	304457	3
	Zn	67	186.502	ug/L	3.339	1	23	50238	2
	Zn	68	186.679	ug/L	2.744	1	137	221961	1
	As	75	14.218	ug/L	0.042	0	267	22163	0
	As-1	75	14.461	ug/L	0.082	0	8149	30370	0
	Se	82	~~-0.107~~	ug/L	0.067	62	-5	-23	47
	Se	78	1.034	ug/L	0.150	14	8278	8689	0
	Mo	98	0.389	ug/L	0.010	2	17	1737	3
	Y	89		ug/L			298590	366460	1
	Kr	83		ug/L			554	719	3
>	In	115		ug/L			979916	940423	1
	Ag	107	~~0.094~~	ug/L	0.003	3	15	1251	2
	Cd	111	2.428	ug/L	0.092	3	63	11170	2
	Cd	114	2.391	ug/L	0.070	2	30	27236	1
	Sb	121	~~0.185~~	ug/L	0.007	3	102	2791	2
	Sb	123	0.187	ug/L	0.008	4	72	2149	2
	Ba	135	247.443	ug/L	8.280	3	11	1008614	1
	Ba	137	245.503	ug/L	7.146	2	17	1728208	1
>	Tb	159		ug/L			1160798	1100374	1
	Tl	205	0.217	ug/L	0.006	2	51	6922	1
	Pb	208	125.130	ug/L	3.348	2	139	5235412	1
	Bi	209		ug/L			2367270	2156542	0
	Th	232	5.759	ug/L	0.225	3	21	229816	2
	U	238	0.550	ug/L	0.010	1	3	22321	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:46:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~AK MM~~ 11.16.12 MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	667813	2
[	Be	9	1.028	ug/L	0.009	0	5	2132	3
	C	13		ug/L			58801	70718	1
	Cl	37		ug/L			3025336	3124918	1
[>	Sc	45		ug/L			671354	728616	1
[	V	51	35.473	ug/L	0.502	1	5156	545479	2
[	V-1	51	35.701	ug/L	0.656	1	130	543057	1
[	Cr	52	38.421	ug/L	0.236	0	15247	523315	1
[	Cr	53	39.173	ug/L	1.085	2	115	58360	1
[	Mn	55	794.786	ug/L	15.153	1	250	14453630	0
[	Co	59	9.691	ug/L	0.212	2	40	136840	0
[>	Ge	72		ug/L			457613	452968	1
[	Ni	60	31.588	ug/L	0.721	2	22	86714	1
[	Ni	62	34.544	ug/L	1.143	3	29	13355	2
[	Cu	63	35.520	ug/L	0.870	2	58	218945	1
[	Cu	65	36.683	ug/L	0.638	1	28	102180	1
[	Zn	66	172.125	ug/L	6.565	3	143	282507	2
[	Zn	67	185.298	ug/L	2.461	1	23	49575	0
[	Zn	68	179.224	ug/L	3.091	1	137	211659	0
[	As	75	10.408	ug/L	0.217	2	267	16184	1
[	As-1	75	10.593	ug/L	0.260	2	8149	24253	0
[	Se	82	S -0.098	ug/L	0.020	20	-5	-21	15
[	Se	78	1.243	ug/L	0.188	15	8278	8718	0
[	Mo	98	0.543	ug/L	0.006	1	17	2404	1
	Y	89		ug/L			298590	554725	1
	Kr	83		ug/L			554	925	3
[>	In	115		ug/L			979916	924382	1
[	Ag	107	0.476	ug/L	0.009	1	15	6152	1
[	Cd	111	1.064	ug/L	0.038	3	63	4846	3
[	Cd	114	0.851	ug/L	0.021	2	30	9554	1
[	Sb	121	S 0.042	ug/L	0.001	2	102	692	2
[	Sb	123	0.042	ug/L	0.002	4	72	522	3
[	Ba	135	298.621	ug/L	4.371	1	11	1196747	0
[	Ba	137	290.337	ug/L	2.599	0	17	2009421	0
[>	Tb	159		ug/L			1160798	1126736	0
[	Tl	205	S 0.186	ug/L	0.006	3	51	6082	2
[	Pb	208	26.887	ug/L	0.265	0	139	1152291	0
[	Bi	209		ug/L			2367270	2133097	0
[	Th	232	8.379	ug/L	0.115	1	21	342472	0
[	U	238	2.031	ug/L	0.025	1	3	84421	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 400
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:50:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Ma Ba~~ Zn
11.16.12
MJT

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			726304	636136	1
[	**Be**	**9**	**0.041**	ug/L	0.003	7	5	85	7
	C	**13**		ug/L			58801	61326	2
	Cl	**37**		ug/L			3025336	3058642	2
[>	**Sc**	**45**		ug/L			671354	632888	0
[	**V**	**51**	**1.298**	ug/L	0.033	2	5156	22017	1
[	**V-1**	**51**	**1.304**	ug/L	0.035	2	130	17341	2
[	**Cr**	**52**	**1.003**	ug/L	0.030	3	15247	25864	1
[	**Cr**	**53**	**1.021**	ug/L	0.022	2	115	1427	2
[	**Mn**	**55**	**124.604**	ug/L	3.450	2	250	1968617	2
[	**Co**	**59**	**0.386**	ug/L	0.001	0	40	4772	0
[>	**Ge**	**72**		ug/L			457613	444686	1
[	**Ni**	**60**	**0.797**	ug/L	0.019	2	22	2168	1
[	**Ni**	**62**	**0.903**	ug/L	0.069	7	29	371	8
[	**Cu**	**63**	**1.174**	ug/L	0.030	2	58	7157	1
[	**Cu**	**65**	**1.198**	ug/L	0.039	3	28	3302	3
[	**Zn**	**66**	**25.175**	ug/L	0.267	1	143	40689	0
[	**Zn**	**67**	**25.964**	ug/L	0.638	2	23	6838	1
[	**Zn**	**68**	**25.970**	ug/L	0.246	0	137	30224	0
[	**As**	**75**	**0.899**	ug/L	0.030	3	267	1609	2
[	**As-1**	**75**	**1.215**	ug/L	0.081	6	8149	9740	0
[	**Se**	**82**	**0.089**	ug/L	0.059	65	-5	9	102
[	**Se**	**78**	**1.165**	ug/L	0.239	20	8278	8526	0
[	**Mo**	**98**	**0.017**	ug/L	0.001	4	17	91	3
	Y	**89**		ug/L			298590	298434	1
	Kr	**83**		ug/L			554	506	1
[>	**In**	**115**		ug/L			979916	941485	1
[	**Ag**	**107**	**0.009**	ug/L	0.000	3	15	129	2
[	**Cd**	**111**	**0.288**	ug/L	0.005	1	63	1379	1
[	**Cd**	**114**	**0.289**	ug/L	0.009	3	30	3318	1
[	**Sb**	**121**	**0.011**	ug/L	0.002	16	102	256	9
[	**Sb**	**123**	**0.012**	ug/L	0.002	19	72	207	11
[	**Ba**	**135**	**37.630**	ug/L	0.775	2	11	153598	0
[	**Ba**	**137**	**37.562**	ug/L	0.159	0	17	264796	0
[>	**Tb**	**159**		ug/L			1160798	1052930	0
[	**Tl**	**205**	**0.017**	ug/L	0.001	3	51	563	3
[	**Pb**	**208**	**13.938**	ug/L	0.179	1	139	558265	1
[	**Bi**	**209**		ug/L			2367270	2205197	0
[	**Th**	**232**	**0.296**	ug/L	0.003	1	21	11334	1
[	**U**	**238**	**0.028**	ug/L	0.001	2	3	1087	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR31 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	653170	1
[	Be	9	0.761	ug/L	0.013	1	5	1545	1
	C	13		ug/L			58801	81288	3
	Cl	37		ug/L			3025336	3033576	0
[>	Sc	45		ug/L			671354	706731	2
[	V	51	23.449	ug/L	1.012	4	5156	351351	2
[	V-1	51	23.534	ug/L	0.987	4	130	347072	2
[	Cr	52	16.990	ug/L	0.519	3	15247	233317	0
[	Cr	53	17.253	ug/L	0.439	2	115	24996	1
[	Mn	55	2150.704	ug/L	61.340	2	250	37926409	0
[	Co	59	6.627	ug/L	0.107	1	40	90797	2
[>	Ge	72		ug/L			457613	456813	1
[	Ni	60	14.680	ug/L	0.036	0	22	40660	1
[	Ni	62	15.894	ug/L	0.225	1	29	6214	2
[	Cu	63	21.081	ug/L	0.744	3	58	131045	1
[	Cu	65	22.443	ug/L	0.785	3	28	63083	5
[	Zn	66	449.072	ug/L	12.922	2	143	743120	2
[	Zn	67	461.213	ug/L	1.219	0	23	124416	1
[	Zn	68	464.143	ug/L	13.107	2	137	552468	1
[	As	75	16.738	ug/L	0.287	1	267	26085	0
[	As-1	75	16.850	ug/L	0.367	2	8149	34099	0
[	Se	82	0.088	ug/L	0.205	232	-5	9	378
[	Se	78	0.728	ug/L	0.390	53	8278	8572	0
[	Mo	98	0.375	ug/L	0.020	5	17	1677	3
	Y	89		ug/L			298590	396305	2
	Kr	83		ug/L			554	710	11
[>	In	115		ug/L			979916	958845	1
[	Ag	107	0.160	ug/L	0.009	5	15	2153	4
[	Cd	111	5.550	ug/L	0.089	1	63	25960	0
[	Cd	114	5.416	ug/L	0.073	1	30	62884	0
[	Sb	121	0.261	ug/L	0.009	3	102	3971	1
[	Sb	123	0.258	ug/L	0.005	2	72	2998	3
[	Ba	135	748.464	ug/L	13.025	1	11	3111128	0
[	Ba	137	743.815	ug/L	14.705	1	17	5339048	0
[>	Tb	159		ug/L			1160798	1120387	0
[	Tl	205	0.303	ug/L	0.003	0	51	9821	1
[	Pb	208	257.186	ug/L	2.655	1	139	10958566	0
[	Bi	209		ug/L			2367270	2196515	0
[	Th	232	5.193	ug/L	0.079	1	21	211053	0
[	U	238	0.506	ug/L	0.003	0	3	20936	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 15:58:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635238 ✓	1
	Be	9	54.646	ug/L	1.333	2	5	107543	1
	C	13		ug/L			58801	56029	2
	Cl	37		ug/L			3025336	3144406	1
>	Sc	45		ug/L			671354	623256 ✓	1
	V	51	50.192	ug/L	0.175	0	5156	658203	0
	V-1	51	50.479	ug/L	0.474	0	130	656770	0
	Cr	52	50.519	ug/L	0.540	1	15247	584145	1
	Cr	53	51.457	ug/L	0.988	1	115	65550	1
	Mn	55	50.346	ug/L	0.069	0	250	783508	1
	Co	59	51.843	ug/L	1.826	3	40	626010	2
>	Ge	72		ug/L			457613	453894 ✓	1
	Ni	60	48.799	ug/L	0.890	1	22	134224	0
	Ni	62	50.125	ug/L	1.243	2	29	19407	2
	Cu	63	49.427	ug/L	0.655	1	58	305288	0
	Cu	65	49.250	ug/L	0.593	1	28	137449	0
	Zn	66	49.719	ug/L	1.167	2	143	81876	1
	Zn	67	50.015	ug/L	0.460	0	23	13426	1
	Zn	68	49.375	ug/L	0.301	0	137	58532	0
	As	75	48.609	ug/L	0.318	0	267	74773	1
	As-1	75	48.872	ug/L	0.661	1	8149	82922	0
	Se	82	49.155	ug/L	0.122	0	-5	8198	1
	Se	78	50.030	ug/L	1.282	2	8278	29361	0
	Mo	98	46.368	ug/L	0.696	1	17	204295	1
	Y	89		ug/L			298590	287369	0
	Kr	83		ug/L			554	528	2
>	In	115		ug/L			979916	909941 ✓	2
	Ag	107	48.363	ug/L	0.269	0	15	613832	2
	Cd	111	50.995	ug/L	0.236	0	63	225903	1
	Cd	114	51.124	ug/L	0.586	1	30	563049	0
	Sb	121	50.900	ug/L	0.971	1	102	715631	0
	Sb	123	50.958	ug/L	0.807	1	72	549082	0
	Ba	135	50.546	ug/L	0.847	1	11	199395	0
	Ba	137	50.006	ug/L	0.792	1	17	340645	0
>	Tb	159		ug/L			1160798	1051076 ✓	0
	Tl	205	52.483	ug/L	0.137	0	51	1590218	0
	Pb	208	51.498	ug/L	0.261	0	139	2058738	0
	Bi	209		ug/L			2367270	2129498	0
	Th	232	52.911	ug/L	0.476	0	21	2017351	0
	U	238	53.047	ug/L	0.501	0	3	2057180	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:05:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	635099 ✓	1
	Be	9	0.002	ug/L	0.001	56	5	9	24
	C	13		ug/L			58801	55687	1
	Cl	37		ug/L			3025336	3023678	0
>	Sc	45		ug/L			671354	615760 ✓	1
	V	51	0.030	ug/L	0.012	40	5156	5115	4
	V-1	51	0.005	ug/L	0.000	3	130	187	1
	Cr	52	0.097	ug/L	0.043	44	15247	15064	4
	Cr	53	0.016	ug/L	0.004	24	115	126	4
	Mn	55	0.037	ug/L	0.045	123	250	797	88
	Co	59	0.002	ug/L	0.002	82	40	65	36
>	Ge	72		ug/L			457613	436174 ✓	0
	Ni	60	0.001	ug/L	0.002	247	22	23	21
	Ni	62	0.075	ug/L	0.022	29	29	56	14
	Cu	63	0.007	ug/L	0.002	21	58	99	9
	Cu	65	0.003	ug/L	0.001	20	28	36	5
	Zn	66	0.003	ug/L	0.007	225	143	141	8
	Zn	67	0.022	ug/L	0.018	80	23	28	15
	Zn	68	0.010	ug/L	0.003	25	137	142	2
	As	75	-0.012	ug/L	0.013	107	267	237	7
	As-1	75	0.412	ug/L	0.066	16	8149	8373	0
	Se	82	0.042	ug/L	0.018	41	-5	1	170
	Se	78	1.543	ug/L	0.228	14	8278	8517	0
	Mo	98	0.007	ug/L	0.003	35	17	46	23
	Y	89		ug/L			298590	280384	1
	Kr	83		ug/L			554	512	1
>	In	115		ug/L			979916	898103 ✓	1
	Ag	107	0.002	ug/L	0.001	44	15	38	27
	Cd	111	0.006	ug/L	0.005	84	63	82	24
	Cd	114	0.002	ug/L	0.001	65	30	49	27
	Sb	121	0.054	ug/L	0.003	5	102	838	3
	Sb	123	0.053	ug/L	0.005	9	72	629	7
	Ba	135	0.013	ug/L	0.016	128	11	60	104
	Ba	137	0.010	ug/L	0.013	124	17	83	100
>	Tb	159		ug/L			1160798	1002039 ✓	0
	Tl	205	0.010	ug/L	0.005	50	51	319	43
	Pb	208	0.006	ug/L	0.006	98	139	364	65
	Bi	209		ug/L			2367270	2132633	0
	Th	232	0.087	ug/L	0.004	4	21	3194	5
	U	238	0.002	ug/L	0.002	81	3	81	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:12:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	626341	2
	Be	9	0.002	ug/L	0.002	144	5	8	54
	C	13		ug/L			58801	58031	1
	Cl	37		ug/L			3025336	3022541	1
>	Sc	45		ug/L			671354	623819	4
	V	51	0.023	ug/L	0.018	77	5156	5084	0
	V-1	51	0.004	ug/L	0.001	25	130	173	11
	Cr	52	0.079	ug/L	0.066	83	15247	15041	0
	Cr	53	0.017	ug/L	0.005	30	115	129	0
	Mn	55	0.020	ug/L	0.001	7	250	549	1
	Co	59	0.003	ug/L	0.001	34	40	71	12
>	Ge	72		ug/L			457613	435796	2
	Ni	60	0.003	ug/L	0.001	27	22	29	5
	Ni	62	0.035	ug/L	0.013	35	29	41	9
	Cu	63	0.038	ug/L	0.004	11	58	282	8
	Cu	65	0.035	ug/L	0.001	3	28	120	3
	Zn	66	0.095	ug/L	0.007	7	143	286	5
	Zn	67	0.081	ug/L	0.008	9	23	43	6
	Zn	68	0.086	ug/L	0.023	27	137	229	13
	As	75	-0.002	ug/L	0.027	1323	267	252	16
	As-1	75	0.431	ug/L	0.052	12	8149	8393	1
	Se	82	-0.001	ug/L	0.106	9193	-5	-5	326
	Se	78	1.592	ug/L	0.225	14	8278	8529	1
	Mo	98	0.001	ug/L	0.001	175	17	18	24
	Y	89		ug/L			298590	283029	2
	Kr	83		ug/L			554	542	7
>	In	115		ug/L			979916	894967	2
	Ag	107	0.001	ug/L	0.000	29	15	24	15
	Cd	111	0.001	ug/L	0.001	44	63	64	6
	Cd	114	0.000	ug/L	0.000	52	30	32	6
	Sb	121	0.013	ug/L	0.002	15	102	279	13
	Sb	123	0.015	ug/L	0.001	9	72	223	9
	Ba	135	0.009	ug/L	0.002	21	11	46	17
	Ba	137	0.008	ug/L	0.001	8	17	70	3
>	Tb	159		ug/L			1160798	992514	0
	Tl	205	0.004	ug/L	0.001	27	51	163	19
	Pb	208	0.003	ug/L	0.001	25	139	240	12
	Bi	209		ug/L			2367270	2130335	1
	Th	232	0.056	ug/L	0.008	14	21	2017	14
	U	238	0.000	ug/L	0.000	10	3	17	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:16:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	652734	2
[	Be	9	27.491	ug/L	0.079	0	5	55606	2
	C	13		ug/L			58801	56855	2
	Cl	37		ug/L			3025336	3038043	2
[>	Sc	45		ug/L			671354	633444	2
[	V	51	26.285	ug/L	0.710	2	5156	352538	1
[	V-1	51	26.420	ug/L	0.764	2	130	349307	1
[	Cr	52	26.430	ug/L	0.432	1	15247	317390	0
[	Cr	53	26.870	ug/L	0.645	2	115	34831	0
[	Mn	55	26.487	ug/L	1.009	3	250	418811	1
[	Co	59	26.465	ug/L	0.123	0	40	324870	1
[>	Ge	72		ug/L			457613	446398	0
[	Ni	60	26.648	ug/L	0.158	0	22	72106	0
[	Ni	62	27.107	ug/L	0.266	0	29	10335	1
[	Cu	63	26.636	ug/L	0.556	2	58	161834	1
[	Cu	65	27.518	ug/L	0.357	1	28	75550	1
[	Zn	66	85.447	ug/L	2.259	2	143	138301	2
[	Zn	67	79.871	ug/L	2.485	3	23	21071	2
[	Zn	68	83.115	ug/L	1.092	1	137	96814	1
[	As	75	25.998	ug/L	0.176	0	267	39453	0
[	As-1	75	26.486	ug/L	0.279	1	8149	47840	0
[	Se	82	83.066	ug/L	0.901	1	-5	13629	0
[	Se	78	84.938	ug/L	1.214	1	8278	43396	0
[	Mo	98	24.281	ug/L	0.259	1	17	105231	1
	Y	89		ug/L			298590	289391	2
	Kr	83		ug/L			554	536	3
[>	In	115		ug/L			979916	921269	0
[	Ag	107	25.250	ug/L	0.489	1	15	324433	1
[	Cd	111	26.013	ug/L	0.222	0	63	116699	0
[	Cd	114	26.128	ug/L	0.175	0	30	291394	0
[	Sb	121	25.908	ug/L	0.047	0	102	368928	0
[	Sb	123	25.910	ug/L	0.371	1	72	282730	0
[	Ba	135	26.228	ug/L	0.372	1	11	104776	1
[	Ba	137	26.300	ug/L	0.197	0	17	181427	0
[>	Tb	159		ug/L			1160798	1042846	0
[	Tl	205	28.103	ug/L	0.113	0	51	844874	0
[	Pb	208	27.602	ug/L	0.342	1	139	1094874	0
[	Bi	209		ug/L			2367270	2199658	0
[	Th	232	27.541	ug/L	0.383	1	21	1041878	1
[	U	238	27.701	ug/L	0.127	0	3	1065863	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A-L SWN
Sample Dil Factor: 100
Comments:

~~Ma, Ba~~
11.16.12 MJJ

Sample Date/Time: Thursday, November 15, 2012 16:21:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	659810	3
[	Be	9	0.149	ug/L	0.004	2	5	310	4
	C	13		ug/L			58801	65054	0
	Cl	37		ug/L			3025336	3122149	1
[>	Sc	45		ug/L			671354	639983	0
[	V	51	6.811	ug/L	0.144	2	5156	95961	1
[	V-1	51	6.880	ug/L	0.140	2	130	92020	1
[	Cr	52	8.956	ug/L	0.175	1	15247	118292	1
[	Cr	53	9.186	ug/L	0.194	2	115	12106	1
[	Mn	55	411.530	ug/L	13.290	3	250	6574111	2
[	Co	59	2.147	ug/L	0.039	1	40	26664	1
[>	Ge	72		ug/L			457613	458183	1
[	Ni	60	6.064	ug/L	0.110	1	22	16857	1
[	Ni	62	6.423	ug/L	0.186	2	29	2535	1
[	Cu	63	4.560	ug/L	0.044	0	58	28490	2
[	Cu	65	4.631	ug/L	0.051	1	28	13071	1
[	Zn	66	32.399	ug/L	0.131	0	143	53919	1
[	Zn	67	37.328	ug/L	0.455	1	23	10120	1
[	Zn	68	36.413	ug/L	0.560	1	137	43608	1
[	As	75	1.929	ug/L	0.029	1	267	3252	0
[	As-1	75	2.102	ug/L	0.053	2	8149	11408	0
[	Se	82	0.132	ug/L	0.077	58	-5	16	76
[	Se	78	0.673	ug/L	0.162	24	8278	8575	0
[	Mo	98	0.111	ug/L	0.004	3	17	508	2
	Y	89		ug/L			298590	314998	1
	Kr	83		ug/L			554	511	2
[>	In	115		ug/L			979916	938320	1
[	Ag	107	0.026	ug/L	0.002	6	15	349	7
[	Cd	111	0.614	ug/L	0.005	0	63	2864	1
	Cd	114	0.591	ug/L	0.017	2	30	6743	1
	Sb	121	0.042	ug/L	0.003	6	102	706	7
	Sb	123	0.043	ug/L	0.003	6	72	543	6
	Ba	135	118.089	ug/L	1.203	1	11	480432	1
	Ba	137	116.205	ug/L	2.052	1	17	816284	0
>	Tb	159		ug/L			1160798	1053119	1
	Tl	205	0.060	ug/L	0.001	1	51	1882	0
	Pb	208	29.278	ug/L	0.287	0	139	1172753	0
	Bi	209		ug/L			2367270	2210131	0
	Th	232	0.934	ug/L	0.100	10	21	35715	10
	U	238	0.101	ug/L	0.004	3	3	3937	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:25:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

11.16.12 MJJ

~~Mn, Ba~~

200.8

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	658425	1
[	Be	9	0.738	ug/L	0.017	2	5	1510	1
	C	13		ug/L			58801	91809	1
	Cl	37		ug/L			3025336	3121092	0
[>	Sc	45		ug/L			671354	708733	0
[	V	51	32.110	ug/L	0.580	1	5156	480751	0
[	V-1	51	32.027	ug/L	0.347	1	130	473892	0
[	Cr	52	42.379	ug/L	1.064	2	15247	559748	1
[	Cr	53	42.130	ug/L	0.213	0	115	61057	0
[	Mn	55	1883.119	ug/L	26.628	1	250	33314547	1
[	Co	59	9.767	ug/L	0.008	0	40	134185	0
[>	Ge	72		ug/L			457613	458066	0
[	Ni	60	30.272	ug/L	0.197	0	22	84048	0
[	Ni	62	32.351	ug/L	0.731	2	29	12651	2
[	Cu	63	22.539	ug/L	0.451	1	58	140530	1
[	Cu	65	22.870	ug/L	0.112	0	28	64435	1
[	Zn	66	153.550	ug/L	3.407	2	143	254914	1
[	Zn	67	178.161	ug/L	1.761	0	23	48204	0
[	Zn	68	169.099	ug/L	5.740	3	137	201948	2
[	As	75	9.640	ug/L	0.130	1	267	15180	0
[	As-1	75	9.784	ug/L	0.160	1	8149	23277	0
[	Se	82	-0.006	ug/L	0.063	1126	-5	-6	169
[	Se	78	0.809	ug/L	0.102	12	8278	8631	0
[	Mo	98	0.403	ug/L	0.012	3	17	1807	2
	Y	89		ug/L			298590	394045	0
	Kr	83		ug/L			554	731	3
[>	In	115		ug/L			979916	927280	0
[	Ag	107	0.109	ug/L	0.005	4	15	1429	4
[	Cd	111	2.968	ug/L	0.055	1	63	13454	2
[	Cd	114	2.890	ug/L	0.040	1	30	32470	1
[	Sb	121	0.113	ug/L	0.003	3	102	1715	2
[	Sb	123	0.118	ug/L	0.006	5	72	1365	4
[	Ba	135	602.318	ug/L	6.484	1	11	2421603	0
[	Ba	137	592.169	ug/L	2.462	0	17	4111490	0
[>	Tb	159		ug/L			1160798	1090266	0
[	Tl	205	0.260	ug/L	0.006	2	51	8220	1
[	Pb	208	141.780	ug/L	0.982	0	139	5879097	0
[	Bi	209		ug/L			2367270	2161536	0
[	Th	232	3.575	ug/L	0.035	0	21	141404	1
[	U	238	0.489	ug/L	0.007	1	3	19667	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:29:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJ

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	660484	1
[	Be	9	0.692	ug/L	0.035	5	5	1420	3
	C	13		ug/L			58801	96600	1
	Cl	37		ug/L			3025336	3188144	1
[>	Sc	45		ug/L			671354	700601	0
[	V	51	31.403	ug/L	0.693	2	5156	464916	1
[	V-1	51	31.630	ug/L	0.860	2	130	462649	2
[	Cr	52	42.696	ug/L	0.715	1	15247	557419	1
[	Cr	53	43.465	ug/L	1.149	2	115	62263	2
[	Mn	55	1813.932	ug/L	25.407	1	250	31722585	0
[	Co	59	9.095	ug/L	0.068	0	40	123512	0
[>	Ge	72		ug/L			457613	451524	1
[	Ni	60	29.754	ug/L	0.416	1	22	81422	0
[	Ni	62	32.092	ug/L	1.039	3	29	12367	1
[	Cu	63	21.961	ug/L	0.414	1	58	134952	0
[	Cu	65	22.411	ug/L	0.507	2	28	62226	0
[	Zn	66	153.158	ug/L	2.241	1	143	250621	0
[	Zn	67	179.789	ug/L	6.313	3	23	47935	2
[	Zn	68	171.662	ug/L	2.773	1	137	202074	0
[	As	75	9.733	ug/L	0.033	0	267	15104	1
[	As-1	75	9.983	ug/L	0.131	1	8149	23247	0
[	Se	82	0.025	ug/L	0.019	75	-5	-1	281
[	Se	78	1.216	ug/L	0.387	31	8278	8678	0
[	Mo	98	0.411	ug/L	0.022	5	17	1819	3
	Y	89		ug/L			298590	385227	1
	Kr	83		ug/L			554	715	0
[>	In	115		ug/L			979916	930091	1
[	Ag	107	0.111	ug/L	0.007	6	15	1448	5
[	Cd	111	2.896	ug/L	0.068	2	63	13170	2
[	Cd	114	2.805	ug/L	0.014	0	30	31601	1
[	Sb	121	0.104	ug/L	0.007	6	102	1595	4
[	Sb	123	0.106	ug/L	0.005	5	72	1236	3
[	Ba	135	603.049	ug/L	9.409	1	11	2431548	0
[	Ba	137	588.890	ug/L	17.888	3	17	4099548	1
[>	Tb	159		ug/L			1160798	1091942	1
[	Tl	205	0.257	ug/L	0.002	0	51	8138	0
[	Pb	208	137.098	ug/L	1.730	1	139	5693255	0
[	Bi	209		ug/L			2367270	2134355	1
[	Th	232	3.028	ug/L	0.045	1	21	119947	0
[	U	238	0.478	ug/L	0.008	1	3	19241	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:33:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

~~Mn, Ba~~
11.16.12 MJJ

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			726304	645469	1
Be	9	27.666	ug/L	0.170	0	5	55337	0
C	13		ug/L			58801	83861	1
Cl	37		ug/L			3025336	3184038	1
Sc	45		ug/L			671354	697616	0
V	51	60.538	ug/L	0.659	1	5156	887489	0
V-1	51	61.562	ug/L	0.603	0	130	896527	0
Cr	52	73.167	ug/L	0.297	0	15247	939872	0
Cr	53	76.545	ug/L	0.768	1	115	109095	1
Mn	55	1775.803	ug/L	37.565	2	250	30921698	1
Co	59	33.627	ug/L	0.301	0	40	454613	0
Ge	72		ug/L			457613	449956	1
Ni	60	58.182	ug/L	0.364	0	22	158657	1
Ni	62	61.318	ug/L	0.359	0	29	23528	1
Cu	63	48.335	ug/L	0.991	2	58	295965	2
Cu	65	48.901	ug/L	1.816	3	28	135259	2
Zn	66	228.669	ug/L	4.171	1	143	372803	0
Zn	67	248.745	ug/L	4.490	1	23	66093	0
Zn	68	246.861	ug/L	4.229	1	137	289535	0
As	75	34.451	ug/L	0.089	0	267	52612	1
As-1	75	34.846	ug/L	0.662	1	8149	60913	2
Se	82	77.361	ug/L	1.455	1	-5	12792	0
Se	78	79.279	ug/L	2.044	2	8278	41365	1
Mo	98	21.842	ug/L	0.580	2	17	95402	2
Y	89		ug/L			298590	390645	0
Kr	83		ug/L			554	764	3
In	115		ug/L			979916	929781	0
Ag	107	21.987	ug/L	0.128	0	15	285138	0
Cd	111	27.484	ug/L	0.328	1	63	124443	1
Cd	114	27.276	ug/L	0.263	0	30	307001	0
Sb	121	1.604	ug/L	0.013	0	102	23137	0
Sb	123	1.593	ug/L	0.023	1	72	17603	0
Ba	135	600.886	ug/L	7.185	1	11	2422373	1
Ba	137	592.539	ug/L	5.461	0	17	4125010	0
Tb	159		ug/L			1160798	1089659	0
Tl	205	26.111	ug/L	0.165	0	51	820217	0
Pb	208	155.382	ug/L	1.273	0	139	6439407	0
Bi	209		ug/L			2367270	2127905	0
Th	232	28.125	ug/L	0.527	1	21	1111662	1
U	238	26.956	ug/L	0.223	0	3	1083740	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:37:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	664283	2
[	Be	9	29.538	ug/L	0.358	1	5	60794	1
	C	13		ug/L			58801	93673	2
	Cl	37		ug/L			3025336	3208810	2
[>	Sc	45		ug/L			671354	696608	3
|	V	51	57.760	ug/L	1.117	1	5156	845461	1
|	V-1	51	58.198	ug/L	1.068	1	130	846019	1
|	Cr	52	67.373	ug/L	2.309	3	15247	864844	0
|	Cr	53	68.828	ug/L	2.146	3	115	97906	0
|	Mn	55	1909.476	ug/L	89.815	4	250	33175034	2
[	Co	59	35.805	ug/L	1.809	5	40	482853	1
[>	Ge	72		ug/L			457613	453327	1
|	Ni	60	57.563	ug/L	1.450	2	22	158108	0
|	Ni	62	59.298	ug/L	0.873	1	29	22922	0
|	Cu	63	50.597	ug/L	0.729	1	58	312108	0
|	Cu	65	51.323	ug/L	1.627	3	28	143023	1
|	Zn	66	241.533	ug/L	4.196	1	143	396728	1
|	Zn	67	258.923	ug/L	8.397	3	23	69317	3
|	Zn	68	256.723	ug/L	5.203	2	137	303346	1
|	As	75	37.743	ug/L	0.705	1	267	58039	1
|	As-1	75	38.375	ug/L	0.888	2	8149	66759	1
|	Se	82	88.120	ug/L	2.422	2	-5	14679	1
|	Se	78	90.822	ug/L	2.891	3	8278	46545	1
[	Mo	98	22.087	ug/L	0.748	3	17	97189	2
	Y	89		ug/L			298590	389286	1
	Kr	83		ug/L			554	724	5
[>	In	115		ug/L			979916	935270	0
|	Ag	107	22.990	ug/L	0.689	2	15	299932	3
|	Cd	111	30.060	ug/L	0.249	0	63	136902	1
|	Cd	114	30.117	ug/L	0.182	0	30	340979	0
|	Sb	121	22.882	ug/L	0.472	2	102	330814	2
|	Sb	123	22.452	ug/L	0.520	2	72	248751	2
|	Ba	135	619.033	ug/L	8.400	1	11	2510292	1
[	Ba	137	604.360	ug/L	9.137	1	17	4232093	1
[>	Tb	159		ug/L			1160798	1103567	0
|	Tl	205	28.747	ug/L	0.701	2	51	914623	2
|	Pb	208	166.327	ug/L	2.344	1	139	6980910	0
|	Bi	209		ug/L			2367270	2147383	0
|	Th	232	31.710	ug/L	0.458	1	21	1269491	1
[	U	238	29.697	ug/L	0.471	1	3	1209252	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:41:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	658736	3
[	Be	9	1.198	ug/L	0.029	2	5	2448	1
	C	13		ug/L			58801	82676	1
	Cl	37		ug/L			3025336	3128837	2
[>	Sc	45		ug/L			671354	710302	1
[	V	51	41.498	ug/L	1.214	2	5156	620945	1
[	V-1	51	41.904	ug/L	1.352	3	130	621179	1
[	Cr	52	29.148	ug/L	0.619	2	15247	390842	0
[	Cr	53	30.448	ug/L	1.142	3	115	44239	1
[	Mn	55	1741.837	ug/L	40.934	2	250	30878157	1
[	Co	59	11.983	ug/L	0.119	0	40	164961	0
[>	Ge	72		ug/L			457613	445188	1
[	Ni	60	20.428	ug/L	0.273	1	22	55124	0
[	Ni	62	21.533	ug/L	0.705	3	29	8191	1
[	Cu	63	17.746	ug/L	0.499	2	58	107526	1
[	Cu	65	17.873	ug/L	0.604	3	28	48933	2
[	Zn	66	221.841	ug/L	2.195	0	143	357893	1
[	Zn	67	274.253	ug/L	7.881	2	23	72089	1
[	Zn	68	262.775	ug/L	6.703	2	137	304890	0
[	As	75	13.448	ug/L	0.274	2	267	20475	1
[	As-1	75	13.677	ug/L	0.357	2	8149	28466	0
[	Se	82	U -0.098	ug/L	0.036	36	-5	-21	28
[	Se	78	1.151	ug/L	0.426	37	8278	8529	0
[	Mo	98	0.681	ug/L	0.007	0	17	2959	2
	Y	89		ug/L			298590	400439	0
	Kr	83		ug/L			554	783	1
[>	In	115		ug/L			979916	909481	1
[	Ag	107	U 0.125	ug/L	0.005	4	15	1595	3
[	Cd	111	2.066	ug/L	0.033	1	63	9204	0
[	Cd	114	1.957	ug/L	0.011	0	30	21569	1
[	Sb	121	U 0.113	ug/L	0.007	6	102	1684	5
[	Sb	123	0.117	ug/L	0.010	8	72	1326	7
[	Ba	135	1037.342	ug/L	18.539	1	11	4090096	0
[	Ba	137	1027.145	ug/L	23.355	2	17	6994160	2
[>	Tb	159		ug/L			1160798	1101185	1
[	Tl	205	0.242	ug/L	0.008	3	51	7726	2
[	Pb	208	82.938	ug/L	1.271	1	139	3473170	0
[	Bi	209		ug/L			2367270	2108586	0
[	Th	232	3.804	ug/L	0.070	1	21	151931	0
[	U	238	0.450	ug/L	0.013	2	3	18289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:46:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	679095	0
[	Be	9	0.996	ug/L	0.005	0	5	2101	0
	C	13		ug/L			58801	81604	2
	Cl	37		ug/L			3025336	3152565	1
[>	Sc	45		ug/L			671354	720489	1
[	V	51	35.318	ug/L	0.386	1	5156	537019	1
[	V-1	51	35.408	ug/L	0.490	1	130	532576	1
[	Cr	52	27.857	ug/L	0.466	1	15247	379635	0
[	Cr	53	28.133	ug/L	0.823	2	115	41477	1
[	Mn	55	935.145	ug/L	24.403	2	250	16814823	1
[	Co	59	9.378	ug/L	0.169	1	40	130952	0
[>	Ge	72		ug/L			457613	454787	1
[	Ni	60	25.938	ug/L	1.038	4	22	71474	2
[	Ni	62	27.951	ug/L	0.499	1	29	10855	1
[	Cu	63	20.965	ug/L	0.543	2	58	129757	1
[	Cu	65	21.178	ug/L	0.617	2	28	59230	2
[	Zn	66	134.335	ug/L	1.580	1	143	221432	0
[	Zn	67	155.238	ug/L	2.024	1	23	41701	0
[	Zn	68	147.173	ug/L	2.502	1	137	174517	0
[	As	75	9.981	ug/L	0.112	1	267	15593	0
[	As-1	75	10.176	ug/L	0.279	2	8149	23709	0
[	Se	82	-0.231	ug/L	0.010	4	-5	-43	3
[	Se	78	1.015	ug/L	0.616	60	8278	8654	1
[	Mo	98	0.323	ug/L	0.022	6	17	1443	5
	Y	89		ug/L			298590	410327	0
	Kr	83		ug/L			554	858	3
[>	In	115		ug/L			979916	920415	0
[	Ag	107	0.176	ug/L	0.005	2	15	2276	2
[	Cd	111	1.202	ug/L	0.026	2	63	5445	1
[	Cd	114	1.032	ug/L	0.007	0	30	11525	0
[	Sb	121	0.060	ug/L	0.002	3	102	955	2
[	Sb	123	0.061	ug/L	0.003	4	72	730	3
[	Ba	135	450.552	ug/L	4.820	1	11	1798036	0
[	Ba	137	443.254	ug/L	5.175	1	17	3054635	0
[>	Tb	159		ug/L			1160798	1091144	0
[	Tl	205	0.177	ug/L	0.002	1	51	5604	0
[	Pb	208	64.259	ug/L	0.461	0	139	2666772	0
[	Bi	209		ug/L			2367270	2150466	0
[	Th	232	4.636	ug/L	0.085	1	21	183512	1
[	U	238	0.943	ug/L	0.015	1	3	37956	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:50:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	669560	1
[	Be	9	1.104	ug/L	0.037	3	5	2295	3
	C	13		ug/L			58801	83986	0
	Cl	37		ug/L			3025336	3077675	2
[>	Sc	45		ug/L			671354	701312	0
[	V	51	35.711	ug/L	0.223	0	5156	528517	0
[	V-1	51	35.889	ug/L	0.267	0	130	525497	1
[	Cr	52	24.080	ug/L	0.237	0	15247	321637	0
[	Cr	53	24.634	ug/L	0.394	1	115	35379	1
[	Mn	55	769.488	ug/L	9.718	1	250	13471579	1
[	Co	59	9.244	ug/L	0.085	0	40	125661	0
[>	Ge	72		ug/L			457613	450092	2
[	Ni	60	29.837	ug/L	0.331	1	22	81389	1
[	Ni	62	30.947	ug/L	1.270	4	29	11886	2
[	Cu	63	24.449	ug/L	0.868	3	58	149705	1
[	Cu	65	24.872	ug/L	0.020	0	28	68855	2
[	Zn	66	136.839	ug/L	1.935	1	143	223218	1
[	Zn	67	156.779	ug/L	3.352	2	23	41673	1
[	Zn	68	148.239	ug/L	3.979	2	137	173950	2
[	As	75	11.121	ug/L	0.231	2	267	17162	1
[	As-1	75	11.368	ug/L	0.306	2	8149	25271	0
[	Se	82	-0.242	ug/L	0.053	21	-5	-45	18
[	Se	78	1.366	ug/L	0.520	38	8278	8712	0
[	Mo	98	0.365	ug/L	0.009	2	17	1609	0
	Y	89		ug/L			298590	471766	2
	Kr	83		ug/L			554	943	4
[>	In	115		ug/L			979916	918949	2
[	Ag	107	0.213	ug/L	0.007	3	15	2744	0
[	Cd	111	1.348	ug/L	0.051	3	63	6083	1
[	Cd	114	1.176	ug/L	0.037	3	30	13105	0
[	Sb	121	0.072	ug/L	0.003	3	102	1114	1
[	Sb	123	0.068	ug/L	0.002	2	72	810	3
[	Ba	135	426.385	ug/L	10.242	2	11	1698233	0
[	Ba	137	418.457	ug/L	13.953	3	17	2877633	0
[>	Tb	159		ug/L			1160798	1091122	1
[	Tl	205	0.184	ug/L	0.000	0	51	5831	1
[	Pb	208	75.544	ug/L	0.496	0	139	3134968	0
[	Bi	209		ug/L			2367270	2115487	1
[	Th	232	4.885	ug/L	0.078	1	21	193372	0
[	U	238	1.635	ug/L	0.033	2	3	65806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 16:55:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	641685 ✓	1
[	Be	9	54.512	ug/L	2.100	3	5	108341	2
	C	13		ug/L			58801	56162	2
	Cl	37		ug/L			3025336	3214467	2
[>	Sc	45		ug/L			671354	632166 ✓	1
[	V	51	49.710	ug/L	0.261	0	5156	661244	1
[	V-1	51	50.166	ug/L	0.458	0	130	662001	1
[	Cr	52	49.490	ug/L	0.989	1	15247	580581	0
[	Cr	53	50.983	ug/L	2.071	4	115	65847	2
[	Mn	55	49.976	ug/L	0.210	0	250	788852	1
[	Co	59	50.644	ug/L	1.932	3	40	620117	1
[>	Ge	72		ug/L			457613	461866 ✓	1
[	Ni	60	48.895	ug/L	1.551	3	22	136836	1
[	Ni	62	48.774	ug/L	0.969	1	29	19215	1
[	Cu	63	48.836	ug/L	0.554	1	58	306939	0
[	Cu	65	48.413	ug/L	1.406	2	28	137469	1
[	Zn	66	47.973	ug/L	1.152	2	143	80394	1
[	Zn	67	50.183	ug/L	0.804	1	23	13706	0
[	Zn	68	49.406	ug/L	0.573	1	137	59595	0
[	As	75	48.756	ug/L	0.776	1	267	76307	0
[	As-1	75	48.904	ug/L	0.779	1	8149	84424	0
[	Se	82	49.294	ug/L	1.118	2	-5	8364	1
[	Se	78	49.733	ug/L	1.217	2	8278	29750	0
[	Mo	98	45.466	ug/L	0.456	1	17	203844	0
	Y	89		ug/L			298590	299481	0
	Kr	83		ug/L			554	527	2
[>	In	115		ug/L			979916	915111 ✓	0
[	Ag	107	45.975	ug/L	0.468	1	15	586791	0
[	Cd	111	50.233	ug/L	0.563	1	63	223804	1
[	Cd	114	50.026	ug/L	0.450	0	30	554183	1
[	Sb	121	49.846	ug/L	0.359	0	102	704965	0
[	Sb	123	49.501	ug/L	0.417	0	72	536533	1
[	Ba	135	49.533	ug/L	1.026	2	11	196558	2
[	Ba	137	49.666	ug/L	0.337	0	17	340329	1
[>	Tb	159		ug/L			1160798	1036888 ✓	0
[	Tl	205	51.651	ug/L	0.439	0	51	1543867	0
[	Pb	208	50.984	ug/L	0.249	0	139	2010693	0
[	Bi	209		ug/L			2367270	2144029	0
[	Th	232	51.869	ug/L	0.105	0	21	1951035	0
[	U	238	53.450	ug/L	0.641	1	3	2044835	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:02:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	624890	1
	Be	9	0.001	ug/L	0.000	24	5	7	7
	C	13		ug/L			58801	58264	3
	Cl	37		ug/L			3025336	3091372	1
>	Sc	45		ug/L			671354	620879	1
	V	51	0.036	ug/L	0.009	24	5156	5231	2
	V-1	51	0.002	ug/L	0.001	73	130	145	12
	Cr	52	0.121	ug/L	0.027	22	15247	15462	1
	Cr	53	0.011	ug/L	0.012	110	115	120	11
	Mn	55	0.007	ug/L	0.003	38	250	347	13
	Co	59	0.001	ug/L	0.000	9	40	53	2
>	Ge	72		ug/L			457613	442099	0
	Ni	60	-0.001	ug/L	0.002	264	22	20	19
	Ni	62	0.053	ug/L	0.012	22	29	48	9
	Cu	63	0.005	ug/L	0.001	28	58	84	9
	Cu	65	0.001	ug/L	0.002	185	28	31	21
	Zn	66	-0.004	ug/L	0.004	115	143	132	4
	Zn	67	0.001	ug/L	0.004	685	23	23	4
	Zn	68	0.010	ug/L	0.005	49	137	143	3
	As	75	-0.010	ug/L	0.012	121	267	244	6
	As-1	75	0.401	ug/L	0.069	17	8149	8470	0
	Se	82	0.022	ug/L	0.007	32	-5	-1	75
	Se	78	1.493	ug/L	0.240	16	8278	8612	0
	Mo	98	0.006	ug/L	0.001	25	17	41	15
	Y	89		ug/L			298590	280031	0
	Kr	83		ug/L			554	529	2
>	In	115		ug/L			979916	897436	0
	Ag	107	0.002	ug/L	0.000	8	15	33	4
	Cd	111	0.002	ug/L	0.000	27	63	65	3
	Cd	114	0.001	ug/L	0.001	91	30	35	19
	Sb	121	0.050	ug/L	0.002	4	102	783	4
	Sb	123	0.050	ug/L	0.004	7	72	593	6
	Ba	135	0.003	ug/L	0.003	105	11	21	51
	Ba	137	0.003	ug/L	0.000	16	17	33	9
>	Tb	159		ug/L			1160798	990519	0
	Tl	205	0.009	ug/L	0.004	44	51	292	38
	Pb	208	0.002	ug/L	0.001	26	139	190	10
	Bi	209		ug/L			2367270	2129554	0
	Th	232	0.093	ug/L	0.005	5	21	3364	4
	U	238	0.001	ug/L	0.000	8	3	54	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			726304	632346	0
	Be	**9**	**0.002**	ug/L	0.001	54	5	8	24
	C	**13**		ug/L			58801	59327	3
	Cl	**37**		ug/L			3025336	3058708	0
>	**Sc**	**45**		ug/L			671354	628473	0
	V	**51**	**0.032**	ug/L	0.006	18	5156	5246	1
	V-1	**51**	**0.003**	ug/L	0.000	9	130	163	2
	Cr	**52**	**0.116**	ug/L	0.013	11	15247	15588	1
	Cr	**53**	**0.022**	ug/L	0.007	32	115	136	6
	Mn	**55**	**0.021**	ug/L	0.002	11	250	569	6
	Co	**59**	**0.004**	ug/L	0.000	10	40	92	6
>	**Ge**	**72**		ug/L			457613	443392	1
	Ni	**60**	**0.003**	ug/L	0.001	44	22	29	11
	Ni	**62**	**0.010**	ug/L	0.014	136	29	32	15
	Cu	**63**	**0.052**	ug/L	0.001	1	58	369	1
	Cu	**65**	**0.043**	ug/L	0.004	9	28	145	7
	Zn	**66**	**0.236**	ug/L	0.013	5	143	516	3
	Zn	**67**	**0.194**	ug/L	0.070	36	23	73	25
	Zn	**68**	**0.224**	ug/L	0.009	3	137	391	1
	As	**75**	**-0.001**	ug/L	0.022	2450	267	258	13
	As-1	**75**	**0.451**	ug/L	0.089	19	8149	8569	0
	Se	**82**	**0.044**	ug/L	0.075	169	-5	2	585
	Se	**78**	**1.676**	ug/L	0.328	19	8278	8712	0
	Mo	**98**	**0.002**	ug/L	0.002	86	17	27	34
	Y	**89**		ug/L			298590	287646	1
	Kr	**83**		ug/L			554	537	4
>	**In**	**115**		ug/L			979916	904024	2
	Ag	**107**	**0.001**	ug/L	0.000	38	15	21	11
	Cd	**111**	**-0.001**	ug/L	0.003	380	63	55	22
	Cd	**114**	**0.001**	ug/L	0.000	52	30	36	11
	Sb	**121**	**0.013**	ug/L	0.001	7	102	273	6
	Sb	**123**	**0.013**	ug/L	0.001	3	72	211	4
	Ba	**135**	**0.006**	ug/L	0.001	17	11	33	13
	Ba	**137**	**0.008**	ug/L	0.001	14	17	70	9
>	**Tb**	**159**		ug/L			1160798	987765	1
	Tl	**205**	**0.005**	ug/L	0.002	42	51	192	33
	Pb	**208**	**0.004**	ug/L	0.001	14	139	277	7
	Bi	**209**		ug/L			2367270	2121511	0
	Th	**232**	**0.071**	ug/L	0.011	15	21	2552	14
	U	**238**	**0.001**	ug/L	0.000	40	3	32	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:

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Sample Date/Time: Thursday, November 15, 2012 17:11:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	633675	0
	Be	9	27.347	ug/L	0.580	2	5	53700	2
	C	13		ug/L			58801	58399	3
	Cl	37		ug/L			3025336	3046858	0
>	Sc	45		ug/L			671354	625792	1
	V	51	25.834	ug/L	1.196	4	5156	342320	2
	V-1	51	26.178	ug/L	1.242	4	130	341878	3
	Cr	52	25.526	ug/L	0.437	1	15247	303332	0
	Cr	53	26.650	ug/L	0.601	2	115	34135	0
	Mn	55	25.752	ug/L	0.536	2	250	402478	2
	Co	59	26.502	ug/L	0.590	2	40	321339	0
>	Ge	72		ug/L			457613	454838	1
	Ni	60	25.378	ug/L	0.177	0	22	69966	0
	Ni	62	25.615	ug/L	0.566	2	29	9951	1
	Cu	63	25.734	ug/L	0.347	1	58	159320	1
	Cu	65	26.423	ug/L	0.159	0	28	73918	1
	Zn	66	81.468	ug/L	1.642	2	143	134365	1
	Zn	67	77.955	ug/L	0.044	0	23	20957	1
	Zn	68	79.266	ug/L	1.935	2	137	94068	1
	As	75	24.970	ug/L	0.384	1	267	38617	0
	As-1	75	25.380	ug/L	0.404	1	8149	47044	0
	Se	82	79.475	ug/L	0.449	0	-5	13286	0
	Se	78	81.014	ug/L	0.512	0	8278	42554	0
	Mo	98	22.523	ug/L	0.489	2	17	99443	1
	Y	89		ug/L			298590	289499	1
	Kr	83		ug/L			554	521	10
>	In	115		ug/L			979916	902731	0
	Ag	107	24.334	ug/L	0.524	2	15	306427	2
	Cd	111	25.424	ug/L	0.279	1	63	111769	1
	Cd	114	25.655	ug/L	0.313	1	30	280372	1
	Sb	121	25.374	ug/L	0.154	0	102	354054	1
	Sb	123	25.003	ug/L	0.052	0	72	267363	0
	Ba	135	25.791	ug/L	0.320	1	11	100963	1
	Ba	137	25.408	ug/L	0.143	0	17	171756	1
>	Tb	159		ug/L			1160798	1014593	1
	Tl	205	27.280	ug/L	0.461	1	51	797777	1
	Pb	208	26.986	ug/L	0.351	1	139	1041285	0
	Bi	209		ug/L			2367270	2144969	0
	Th	232	26.942	ug/L	0.691	2	21	991397	1
	U	238	27.195	ug/L	0.664	2	3	1017758	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:16:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	680889	0
[	Be	9	1.296	ug/L	0.011	0	5	2740	0
	C	13		ug/L			58801	75830	1
	Cl	37		ug/L			3025336	3113816	1
[>	Sc	45		ug/L			671354	740699 ✓	2
[	V	51	40.768	ug/L	1.728	4	5156	635966	1
[	V-1	51	41.120	ug/L	1.756	4	130	635392	1
[	Cr	52	34.202	ug/L	0.608	1	15247	475304	1
[	Cr	53	35.335	ug/L	0.543	1	115	53525	1
[	Mn	55	403.174	ug/L	9.834	2	250	7451571	0
[	Co	59	9.888	ug/L	0.333	3	40	141893	1
[>	Ge	72		ug/L			457613	461505	1
[	Ni	60	29.143	ug/L	0.561	1	22	81520	1
[	Ni	62	31.577	ug/L	0.806	2	29	12441	2
[	Cu	63	28.271	ug/L	0.247	0	58	177580	0
[	Cu	65	29.107	ug/L	0.772	2	28	82604	1
[	Zn	66	108.641	ug/L	5.015	4	143	181716	3
[	Zn	67	132.371	ug/L	3.045	2	23	36091	2
[	Zn	68	121.297	ug/L	1.737	1	137	145995	0
[	As	75	8.969	ug/L	0.188	2	267	14246	1
[	As-1	75	9.091	ug/L	0.258	2	8149	22372	0
[	Se	82	↳0.462	ug/L	0.133	28	-5	-83	25
[	Se	78	0.987	ug/L	0.191	19	8278	8773	0
[	Mo	98	0.336	ug/L	0.010	2	17	1520	3
	Y	89		ug/L			298590	561426	1
	Kr	83		ug/L			554	1122	2
[>	In	115		ug/L			979916	909998	0
[	Ag	107	0.265	ug/L	0.004	1	15	3378	2
[	Cd	111	0.662	ug/L	0.027	4	63	2990	3
[	Cd	114	0.355	ug/L	0.015	4	30	3938	3
[	Sb	121	↳ 0.051	ug/L	0.004	8	102	814	7
[	Sb	123	0.050	ug/L	0.005	9	72	606	7
[	Ba	135	413.310	ug/L	2.943	0	11	1630821	1
[	Ba	137	405.032	ug/L	4.058	1	17	2759699	0
[>	Tb	159		ug/L			1160798	1101527	0
[	Tl	205	↳ 0.152	ug/L	0.003	1	51	4866	1
[	Pb	208	26.132	ug/L	0.041	0	139	1094903	0
[	Bi	209		ug/L			2367270	2111347	1
[	Th	232	5.715	ug/L	0.075	1	21	228403	1
[	U	238	2.296	ug/L	0.018	0	3	93333	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:20:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	700795	1
[	Be	9	1.299	ug/L	0.064	4	5	2824	4
	C	13		ug/L			58801	75246	3
	Cl	37		ug/L			3025336	3124450	0
[>	Sc	45		ug/L			671354	740487	0
[	V	51	40.627	ug/L	1.321	3	5156	634159	3
[	V-1	51	40.838	ug/L	1.241	3	130	631411	3
[	Cr	52	28.061	ug/L	0.122	0	15247	392974	0
[	Cr	53	28.721	ug/L	0.468	1	115	43527	1
[	Mn	55	592.016	ug/L	9.529	1	250	10943361	1
[	Co	59	10.007	ug/L	0.350	3	40	143619	2
[>	Ge	72		ug/L			457613	459196	0
[	Ni	60	32.873	ug/L	0.439	1	22	91491	0
[	Ni	62	33.926	ug/L	0.914	2	29	13298	2
[	Cu	63	32.769	ug/L	1.195	3	58	204780	3
[	Cu	65	33.291	ug/L	0.417	1	28	94011	0
[	Zn	66	104.639	ug/L	2.018	1	143	174196	1
[	Zn	67	127.613	ug/L	3.738	2	23	34619	2
[	Zn	68	117.250	ug/L	2.204	1	137	140446	2
[	As	75	9.680	ug/L	0.140	1	267	15278	0
[	As-1	75	9.811	ug/L	0.133	1	8149	23376	0
[	Se	82	U -0.368	ug/L	0.112	30	-5	-67	28
[	Se	78	1.121	ug/L	0.249	22	8278	8786	1
[	Mo	98	0.350	ug/L	0.008	2	17	1578	2
	Y	89		ug/L			298590	617372	1
	Kr	83		ug/L			554	1123	3
[>	In	115		ug/L			979916	920435	1
[	Ag	107	0.382	ug/L	0.005	1	15	4921	2
[	Cd	111	0.708	ug/L	0.015	2	63	3230	1
[	Cd	114	0.400	ug/L	0.006	1	30	4483	0
[	Sb	121	U 0.028	ug/L	0.002	6	102	499	5
[	Sb	123	0.030	ug/L	0.002	5	72	399	3
[	Ba	135	376.487	ug/L	6.978	1	11	1502270	0
[	Ba	137	371.381	ug/L	3.288	0	17	2559267	0
[>	Tb	159		ug/L			1160798	1096597	1
[	Tl	205	U 0.171	ug/L	0.003	1	51	5451	1
[	Pb	208	21.163	ug/L	0.422	1	139	882616	0
[	Bi	209		ug/L			2367270	2087434	0
[	Th	232	6.090	ug/L	0.086	1	21	242250	0
[	U	238	2.787	ug/L	0.040	1	3	112736	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:24:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

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	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	708238	0
[	Be	9	1.202	ug/L	0.007	0	5	2644	0
	C	13		ug/L			58801	75490	0
	Cl	37		ug/L			3025336	3186111	3
[>	Sc	45		ug/L			671354	761476	1
[	V	51	36.439	ug/L	0.375	1	5156	585470	1
[	V-1	51	36.671	ug/L	0.432	1	130	583031	2
[	Cr	52	27.660	ug/L	0.533	1	15247	398537	0
[	Cr	53	28.397	ug/L	0.581	2	115	44254	1
[	Mn	55	393.048	ug/L	6.334	1	250	7470745	0
[	Co	59	9.034	ug/L	0.164	1	40	133323	0
[>	Ge	72		ug/L			457613	468129	2
[	Ni	60	25.476	ug/L	0.559	2	22	72264	0
[	Ni	62	27.265	ug/L	0.398	1	29	10899	1
[	Cu	63	34.274	ug/L	1.207	3	58	218229	0
[	Cu	65	34.660	ug/L	1.404	4	28	99712	1
[	Zn	66	94.778	ug/L	3.819	4	143	160756	1
[	Zn	67	114.160	ug/L	3.111	2	23	31566	2
[	Zn	68	102.095	ug/L	3.304	3	137	124611	1
[	As	75	7.682	ug/L	0.178	2	267	12415	1
[	As-1	75	7.808	ug/L	0.342	4	8149	20659	0
[	Se	82	-0.403	ug/L	0.077	19	-5	-74	18
[	Se	78	1.061	ug/L	0.717	67	8278	8925	0
[	Mo	98	0.256	ug/L	0.015	5	17	1178	2
	Y	89		ug/L			298590	686201	0
	Kr	83		ug/L			554	1138	4
[>	In	115		ug/L			979916	915309	0
[	Ag	107	0.636	ug/L	0.012	1	15	8134	1
[	Cd	111	0.580	ug/L	0.042	7	63	2641	7
[	Cd	114	0.270	ug/L	0.001	0	30	3019	1
[	Sb	121	0.019	ug/L	0.003	16	102	363	11
[	Sb	123	0.019	ug/L	0.003	14	72	274	10
[	Ba	135	287.199	ug/L	1.237	0	11	1139823	1
[	Ba	137	285.348	ug/L	3.697	1	17	1955464	0
[>	Tb	159		ug/L			1160798	1107662	1
[	Tl	205	0.163	ug/L	0.002	0	51	5243	1
[	Pb	208	17.874	ug/L	0.139	0	139	753104	0
[	Bi	209		ug/L			2367270	2087267	1
[	Th	232	5.707	ug/L	0.083	1	21	229309	0
[	U	238	3.097	ug/L	0.083	2	3	126574	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:

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Sample Date/Time: Thursday, November 15, 2012 17:28:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	672119	1
[	Be	9	0.931	ug/L	0.032	3	5	1944	4
	C	13		ug/L			58801	77697	1
	Cl	37		ug/L			3025336	3157728	1
[>	Sc	45		ug/L			671354	693465	1
[	V	51	32.303	ug/L	0.797	2	5156	473161	1
[	V-1	51	32.381	ug/L	0.971	2	130	468746	2
[	Cr	52	21.791	ug/L	0.178	0	15247	289321	1
[	Cr	53	22.022	ug/L	0.506	2	115	31281	1
[	Mn	55	842.080	ug/L	17.824	2	250	14575171	1
[	Co	59	8.061	ug/L	0.207	2	40	108337	1
[>	Ge	72		ug/L			457613	455755	2
[	Ni	60	23.433	ug/L	0.621	2	22	64706	0
[	Ni	62	24.856	ug/L	0.365	1	29	9675	1
[	Cu	63	14.977	ug/L	0.613	4	58	92873	2
[	Cu	65	15.188	ug/L	0.674	4	28	42552	2
[	Zn	66	146.813	ug/L	4.157	2	143	242401	0
[	Zn	67	170.687	ug/L	5.126	3	23	45925	0
[	Zn	68	162.640	ug/L	4.463	2	137	193186	0
[	As	75	9.413	ug/L	0.307	3	267	14745	0
[	As-1	75	9.691	ug/L	0.394	4	8149	23006	0
[	Se	82	u -0.334	ug/L	0.102	30	-5	-61	30
[	Se	78	1.228	ug/L	0.379	30	8278	8763	1
[	Mo	98	0.345	ug/L	0.016	4	17	1540	2
	Y	89		ug/L			298590	386526	2
	Kr	83		ug/L			554	869	6
[>	In	115		ug/L			979916	923177	1
[	Ag	107	u 0.197	ug/L	0.013	6	15	2547	4
[	Cd	111	1.167	ug/L	0.009	0	63	5301	0
[	Cd	114	1.012	ug/L	0.018	1	30	11336	0
[	Sb	121	u 0.049	ug/L	0.002	4	102	790	2
[	Sb	123	0.048	ug/L	0.003	6	72	588	5
[	Ba	135	489.296	ug/L	11.355	2	11	1958089	0
[	Ba	137	471.117	ug/L	8.931	1	17	3255918	0
[>	Tb	159		ug/L			1160798	1065791	0
[	Tl	205	u 0.139	ug/L	0.001	0	51	4304	1
[	Pb	208	37.625	ug/L	0.292	0	139	1525218	0
[	Bi	209		ug/L			2367270	2113366	0
[	Th	232	4.344	ug/L	0.003	0	21	167958	1
[	U	238	0.637	ug/L	0.002	0	3	25070	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:32:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			726304	671473	3
Be	9	0.843	ug/L	0.038	4	5	1757	1
C	13		ug/L			58801	86867	0
Cl	37		ug/L			3025336	3140166	1
> Sc	45		ug/L			671354	694730	1
V	51	32.021	ug/L	0.905	2	5156	470037	3
V-1	51	32.226	ug/L	0.802	2	130	467476	3
Cr	52	22.986	ug/L	0.414	1	15247	304821	0
Cr	53	23.633	ug/L	0.242	1	115	33625	1
Mn	55	1029.036	ug/L	28.522	2	250	17842112	1
Co	59	8.138	ug/L	0.093	1	40	109582	0
> Ge	72		ug/L			457613	456056	1
Ni	60	19.485	ug/L	0.386	1	22	53878	2
Ni	62	20.857	ug/L	0.399	1	29	8130	1
Cu	63	19.133	ug/L	0.265	1	58	118775	0
Cu	65	19.664	ug/L	0.518	2	28	55155	1
Zn	66	124.248	ug/L	1.230	0	143	205396	0
Zn	67	137.455	ug/L	2.581	1	23	37034	2
Zn	68	132.929	ug/L	0.967	0	137	158103	0
As	75	16.518	ug/L	0.204	1	267	25704	0
As-1	75	16.805	ug/L	0.211	1	8149	33977	0
Se	82	-0.045	ug/L	0.060	133	-5	-12	78
Se	78	1.270	ug/L	0.069	5	8278	8789	0
Mo	98	0.451	ug/L	0.022	4	17	2014	3
Y	89		ug/L			298590	392096	0
Kr	83		ug/L			554	730	2
> In	115		ug/L			979916	931241	1
Ag	107	0.093	ug/L	0.001	1	15	1219	1
Cd	111	1.679	ug/L	0.023	1	63	7669	0
Cd	114	1.608	ug/L	0.026	1	30	18149	1
Sb	121	0.080	ug/L	0.003	4	102	1250	3
Sb	123	0.082	ug/L	0.001	1	72	975	0
Ba	135	277.351	ug/L	1.315	0	11	1119821	1
Ba	137	277.746	ug/L	4.533	1	17	1936313	0
> Tb	159		ug/L			1160798	1083148	1
Tl	205	0.160	ug/L	0.005	3	51	5038	3
Pb	208	70.984	ug/L	1.056	1	139	2923951	0
Bi	209		ug/L			2367270	2126716	0
Th	232	4.078	ug/L	0.043	1	21	160235	0
U	238	0.771	ug/L	0.005	0	3	30806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:36:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	694379	0
[	Be	9	0.751	ug/L	0.033	4	5	1620	3
	C	13		ug/L			58801	79704	1
	Cl	37		ug/L			3025336	3116892	1
[>	Sc	45		ug/L			671354	701369	1
[	V	51	27.606	ug/L	0.484	1	5156	409771	1
[	V-1	51	27.572	ug/L	0.352	1	130	403749	0
[	Cr	52	22.339	ug/L	0.214	0	15247	299539	0
[	Cr	53	22.216	ug/L	0.271	1	115	31922	2
[	Mn	55	1610.403	ug/L	40.654	2	250	28194174	2
[	Co	59	8.784	ug/L	0.167	1	40	119427	2
[>	Ge	72		ug/L			457613	461954	2
[	Ni	60	24.177	ug/L	0.955	3	22	67666	1
[	Ni	62	25.807	ug/L	0.637	2	29	10181	0
[	Cu	63	16.297	ug/L	0.360	2	58	102464	0
[	Cu	65	16.633	ug/L	0.360	2	28	47256	0
[	Zn	66	131.048	ug/L	2.974	2	143	219400	1
[	Zn	67	139.946	ug/L	2.376	1	23	38184	0
[	Zn	68	135.161	ug/L	5.380	3	137	162755	2
[	As	75	20.708	ug/L	0.772	3	267	32561	1
[	As-1	75	20.912	ug/L	0.866	4	8149	40802	1
[	Se	82	-0.135	ug/L	0.063	46	-5	-28	36
[	Se	78	0.924	ug/L	0.366	39	8278	8752	0
[	Mo	98	0.382	ug/L	0.007	1	17	1730	1
	Y	89		ug/L			298590	383834	1
	Kr	83		ug/L			554	773	2
[>	In	115		ug/L			979916	933212	0
[	Ag	107	0.124	ug/L	0.003	2	15	1633	1
[	Cd	111	1.604	ug/L	0.050	3	63	7344	3
[	Cd	114	1.524	ug/L	0.019	1	30	17245	1
[	Sb	121	0.098	ug/L	0.004	4	102	1511	3
[	Sb	123	0.101	ug/L	0.003	2	72	1184	3
[	Ba	135	273.149	ug/L	4.551	1	11	1105199	1
[	Ba	137	270.730	ug/L	4.598	1	17	1891580	1
[>	Tb	159		ug/L			1160798	1075202	0
[	Tl	205	0.197	ug/L	0.004	2	51	6155	1
[	Pb	208	87.323	ug/L	0.925	1	139	3570933	0
[	Bi	209		ug/L			2367270	2155438	2
[	Th	232	4.326	ug/L	0.025	0	21	168766	1
[	U	238	0.533	ug/L	0.003	0	3	21133	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:41:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	670867	2
[	Be	9	0.738	ug/L	0.012	1	5	1540	2
	C	13		ug/L			58801	79897	1
	Cl	37		ug/L			3025336	3116504	1
[>	Sc	45		ug/L			671354	679830	1
[	V	51	26.498	ug/L	0.881	3	5156	381349	1
[	V-1	51	26.510	ug/L	0.807	3	130	376173	1
[	Cr	52	18.562	ug/L	0.849	4	15247	243759	2
[	Cr	53	18.583	ug/L	0.614	3	115	25889	1
[	Mn	55	958.176	ug/L	37.090	3	250	16253319	2
[	Co	59	6.810	ug/L	0.176	2	40	89721	0
[>	Ge	72		ug/L			457613	458129	1
[	Ni	60	18.894	ug/L	0.523	2	22	52467	1
[	Ni	62	20.510	ug/L	0.126	0	29	8033	1
[	Cu	63	15.229	ug/L	0.111	0	58	94983	0
[	Cu	65	15.195	ug/L	0.210	1	28	42824	0
[	Zn	66	143.187	ug/L	2.413	1	143	237746	0
[	Zn	67	147.734	ug/L	2.713	1	23	39978	0
[	Zn	68	143.250	ug/L	2.043	1	137	171145	1
[	As	75	12.043	ug/L	0.209	1	267	18898	0
[	As-1	75	12.266	ug/L	0.268	2	8149	27115	0
[	Se	82	-0.050	ug/L	0.042	83	-5	-13	51
[	Se	78	0.991	ug/L	0.252	25	8278	8710	0
[	Mo	98	0.462	ug/L	0.015	3	17	2071	3
	Y	89		ug/L			298590	383395	1
	Kr	83		ug/L			554	704	0
[>	In	115		ug/L			979916	915967	0
[	Ag	107	0.167	ug/L	0.004	2	15	2144	2
[	Cd	111	1.604	ug/L	0.027	1	63	7211	2
[	Cd	114	1.464	ug/L	0.022	1	30	16260	1
[	Sb	121	0.097	ug/L	0.002	2	102	1466	1
[	Sb	123	0.097	ug/L	0.004	4	72	1115	3
[	Ba	135	206.064	ug/L	2.171	1	11	818418	1
[	Ba	137	204.119	ug/L	1.458	0	17	1399955	1
[>	Tb	159		ug/L			1160798	1068230	1
[	Tl	205	0.157	ug/L	0.003	2	51	4870	0
[	Pb	208	63.303	ug/L	1.438	2	139	2571448	0
[	Bi	209		ug/L			2367270	2124075	1
[	Th	232	4.069	ug/L	0.050	1	21	157697	0
[	U	238	1.456	ug/L	0.043	2	3	57384	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:45:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

rr Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	660319	1
[	Be	9	0.716	ug/L	0.017	2	5	1468	1
	C	13		ug/L			58801	88005	0
	Cl	37		ug/L			3025336	3087078	1
[>	Sc	45		ug/L			671354	689069	1
[	V	51	22.560	ug/L	0.653	2	5156	330014	3
[	V-1	51	22.581	ug/L	0.587	2	130	324907	2
[	Cr	52	14.376	ug/L	0.180	1	15247	194971	1
[	Cr	53	14.425	ug/L	0.630	4	115	20398	3
[	Mn	55	1281.819	ug/L	61.348	4	250	22041800	3
[	Co	59	5.869	ug/L	0.124	2	40	78400	1
[>	Ge	72		ug/L			457613	458567	0
[	Ni	60	12.877	ug/L	0.231	1	22	35802	0
[	Ni	62	14.204	ug/L	0.259	1	29	5577	2
[	Cu	63	13.976	ug/L	0.209	1	58	87260	1
[	Cu	65	14.244	ug/L	0.332	2	28	40180	1
[	Zn	66	146.951	ug/L	2.181	1	143	244235	0
[	Zn	67	161.885	ug/L	4.186	2	23	43848	2
[	Zn	68	160.306	ug/L	1.892	1	137	191684	0
[	As	75	10.226	ug/L	0.187	1	267	16103	1
[	As-1	75	10.489	ug/L	0.231	2	8149	24393	0
[	Se	82	~0.098	ug/L	0.040	40	-5	11	60
[	Se	78	1.156	ug/L	0.214	18	8278	8789	0
[	Mo	98	0.245	ug/L	0.002	0	17	1106	0
	Y	89		ug/L			298590	386451	1
	Kr	83		ug/L			554	631	2
[>	In	115		ug/L			979916	929731	1
[	Ag	107	~0.076	ug/L	0.003	3	15	1004	4
[	Cd	111	1.949	ug/L	0.018	0	63	8879	0
[	Cd	114	1.914	ug/L	0.009	0	30	21572	0
[	Sb	121	~0.159	ug/L	0.001	0	102	2374	0
[	Sb	123	0.159	ug/L	0.006	3	72	1816	4
[	Ba	135	402.337	ug/L	6.590	1	11	1621745	0
[	Ba	137	392.873	ug/L	2.875	0	17	2734942	1
[>	Tb	159		ug/L			1160798	1071071	0
[	Tl	205	~0.169	ug/L	0.004	2	51	5267	2
[	Pb	208	80.066	ug/L	1.147	1	139	3261789	1
[	Bi	209		ug/L			2367270	2139069	0
[	Th	232	3.880	ug/L	0.017	0	21	150777	0
[	U	238	0.816	ug/L	0.006	0	3	32234	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:50:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			726304	630489	2
	Be	9	55.409	ug/L	2.659	4	5	108178	2
	C	13		ug/L			58801	56806	2
	Cl	37		ug/L			3025336	3107422	2
>	Sc	45		ug/L			671354	636488	2
	V	51	50.167	ug/L	1.179	2	5156	671704	1
	V-1	51	50.537	ug/L	1.446	2	130	671321	1
	Cr	52	49.571	ug/L	0.854	1	15247	585565	1
	Cr	53	50.780	ug/L	1.486	2	115	66046	1
	Mn	55	50.043	ug/L	1.042	2	250	795117	0
	Co	59	50.727	ug/L	1.022	2	40	625522	0
>	Ge	72		ug/L			457613	459912	2
	Ni	60	48.098	ug/L	3.142	6	22	133953	4
	Ni	62	48.361	ug/L	0.890	1	29	18973	2
	Cu	63	48.371	ug/L	1.746	3	58	302613	1
	Cu	65	48.398	ug/L	1.546	3	28	136817	1
	Zn	66	48.938	ug/L	1.314	2	143	81652	1
	Zn	67	50.299	ug/L	0.751	1	23	13679	0
	Zn	68	49.441	ug/L	1.120	2	137	59372	0
	As	75	48.536	ug/L	1.180	2	267	75627	0
	As-1	75	48.938	ug/L	1.371	2	8149	84100	0
	Se	82	49.238	ug/L	0.882	1	-5	8319	0
	Se	78	50.574	ug/L	1.465	2	8278	29979	0
	Mo	98	44.653	ug/L	1.521	3	17	199314	2
	Y	89		ug/L			298590	294878	1
	Kr	83		ug/L			554	514	4
>	In	115		ug/L			979916	897000	1
	Ag	107	45.764	ug/L	1.181	2	15	572511	2
	Cd	111	50.813	ug/L	0.367	0	63	221917	1
	Cd	114	51.319	ug/L	0.263	0	30	557214	0
	Sb	121	50.554	ug/L	0.771	1	102	700774	0
	Sb	123	50.626	ug/L	0.466	0	72	537823	0
	Ba	135	50.130	ug/L	0.290	0	11	194968	0
	Ba	137	49.652	ug/L	0.382	0	17	333490	1
>	Tb	159		ug/L			1160798	1008137	0
	Tl	205	52.166	ug/L	0.690	1	51	1515994	1
	Pb	208	51.438	ug/L	0.232	0	139	1972384	0
	Bi	209		ug/L			2367270	2078769	1
	Th	232	52.422	ug/L	0.200	0	21	1917120	0
	U	238	53.884	ug/L	0.653	1	3	2004301	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 17:56:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			726304	625174 ✓	1
[	Be	9	-0.000	ug/L	0.001	948	5	4	44
	C	13		ug/L			58801	57806	0
	Cl	37		ug/L			3025336	3032251	0
[>	Sc	45		ug/L			671354	603951 ✓	1
[	V	51	0.037	ug/L	0.010	26	5156	5100	2
[	V-1	51	-0.000	ug/L	0.001	19207	130	117	9
[	Cr	52	0.125	ug/L	0.026	20	15247	15083	2
[	Cr	53	0.005	ug/L	0.006	121	115	110	8
[	Mn	55	0.011	ug/L	0.005	47	250	396	18
[	Co	59	0.002	ug/L	0.001	46	40	60	17
[>	Ge	72		ug/L			457613	436976 ✓	1
[	Ni	60	-0.001	ug/L	0.001	119	22	19	12
[	Ni	62	0.061	ug/L	0.032	52	29	51	22
[	Cu	63	0.005	ug/L	0.002	42	58	83	14
[	Cu	65	0.003	ug/L	0.001	34	28	34	8
[	Zn	66	-0.007	ug/L	0.012	184	143	126	16
[	Zn	67	0.015	ug/L	0.024	164	23	26	22
[	Zn	68	0.007	ug/L	0.003	41	137	138	3
[	As	75	0.004	ug/L	0.004	93	267	261	3
[	As-1	75	0.511	ug/L	0.067	13	8149	8534	1
[	Se	82	0.027	ug/L	0.020	74	-5	0	408
[	Se	78	1.836	ug/L	0.246	13	8278	8652	1
[	Mo	98	0.006	ug/L	0.001	22	17	43	14
	Y	89		ug/L			298590	275379	1
	Kr	83		ug/L			554	518	1
[>	In	115		ug/L			979916	872475 ✓	1
[	Ag	107	0.001	ug/L	0.000	24	15	27	11
[	Cd	111	0.003	ug/L	0.001	34	63	69	5
[	Cd	114	0.001	ug/L	0.001	105	30	39	34
[	Sb	121	0.053	ug/L	0.002	4	102	807	5
[	Sb	123	0.054	ug/L	0.002	4	72	618	5
[	Ba	135	0.003	ug/L	0.002	62	11	22	32
[	Ba	137	0.003	ug/L	0.000	13	17	37	6
[>	Tb	159		ug/L			1160798	958815 ✓	0
[	Tl	205	0.010	ug/L	0.004	43	51	316	38
[	Pb	208	0.002	ug/L	0.001	33	139	189	12
[	Bi	209		ug/L			2367270	2055581	0
[	Th	232	0.093	ug/L	0.005	5	21	3244	4
[	U	238	0.001	ug/L	0.000	26	3	53	23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:02:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				617808	1
	Be	9		ug/L				9	77
	C	13		ug/L				57054	3
	Cl	37		ug/L				3021538	0
>	Sc	45		ug/L				603049	0
	V	51		ug/L				5204	0
	V-1	51		ug/L				161	45
	Cr	52		ug/L				15338	1
	Cr	53		ug/L				120	12
	Mn	55		ug/L				851	107
	Co	59		ug/L				76	21
>	Ge	72		ug/L				436831	1
	Ni	60		ug/L				19	53
	Ni	62		ug/L				34	17
	Cu	63		ug/L				79	18
	Cu	65		ug/L				33	8
	Zn	66		ug/L				137	18
	Zn	67		ug/L				26	15
	Zn	68		ug/L				127	12
	As	75		ug/L				255	5
	As-1	75		ug/L				8509	0
	Se	82		ug/L				6	162
	Se	78		ug/L				8644	0
	Mo	98		ug/L				14	60
	Y	89		ug/L				278872	2
	Kr	83		ug/L				509	5
>	In	115		ug/L				878990	1
	Ag	107		ug/L				24	70
	Cd	111		ug/L				66	14
	Cd	114		ug/L				45	35
	Sb	121		ug/L				270	12
	Sb	123		ug/L				194	7
	Ba	135		ug/L				45	122
	Ba	137		ug/L				76	120
>	Tb	159		ug/L				958896	1
	Tl	205		ug/L				228	44
	Pb	208		ug/L				272	74
	Bi	209		ug/L				2065247	0
	Th	232		ug/L				1210	4
	U	238		ug/L				68	126

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:06:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	616607	3
	Be	9	55.330	ug/L	1.709	3	9	105657	0
	C	13		ug/L			57054	53840	4
	Cl	37		ug/L			3021538	3172000	4
>	Sc	45		ug/L			603049	621016	3
	V	51	50.756	ug/L	1.831	3	5204	663165	0
	V-1	51	51.064	ug/L	1.713	3	161	661567	1
	Cr	52	50.239	ug/L	2.243	4	15338	579986	0
	Cr	53	51.248	ug/L	1.657	3	120	65027	1
	Mn	55	50.798	ug/L	1.864	3	851	787652	0
	Co	59	51.174	ug/L	1.941	3	76	615329	0
>	Ge	72		ug/L			436831	448760	1
	Ni	60	49.263	ug/L	1.727	3	19	133940	2
	Ni	62	48.858	ug/L	1.088	2	34	18708	1
	Cu	63	48.863	ug/L	0.420	0	79	298420	0
	Cu	65	49.434	ug/L	1.210	2	33	136392	1
	Zn	66	50.157	ug/L	0.152	0	137	81677	1
	Zn	67	50.782	ug/L	1.078	2	26	13480	1
	Zn	68	50.525	ug/L	0.420	0	127	59212	1
	As	75	49.336	ug/L	0.381	0	255	75030	1
	As-1	75	49.336	ug/L	0.698	1	8509	83438	1
	Se	82	49.758	ug/L	0.380	0	6	8216	1
	Se	78	49.741	ug/L	1.322	2	8644	29670	0
	Mo	98	44.752	ug/L	0.239	0	14	194959	1
	Y	89		ug/L			278872	290428	1
	Kr	83		ug/L			509	534	7
>	In	115		ug/L			878990	885081	1
	Ag	107	43.687	ug/L	0.189	0	24	539310	1
	Cd	111	50.922	ug/L	0.370	0	66	219439	1
	Cd	114	50.288	ug/L	0.539	1	45	538788	1
	Sb	121	50.806	ug/L	0.676	1	270	695101	0
	Sb	123	49.938	ug/L	0.618	1	194	523591	0
	Ba	135	50.434	ug/L	0.596	1	45	193573	0
	Ba	137	49.702	ug/L	0.841	1	76	329439	1
>	Tb	159		ug/L			958896	993709	2
	Tl	205	52.637	ug/L	0.743	1	228	1507736	0
	Pb	208	51.215	ug/L	1.075	2	272	1935325	0
	Bi	209		ug/L			2065247	2040778	1
	Th	232	52.632	ug/L	0.843	1	1210	1898089	0
	U	238	53.915	ug/L	1.105	2	68	1976336	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:13:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	612926 ✓	0
	Be	9	-0.000	ug/L	0.003	2252	9	8	73
	C	13		ug/L			57054	55989	2
	Cl	37		ug/L			3021538	3095799	0
>	Sc	45		ug/L			603049	595688 ✓	2
	V	51	-0.006	ug/L	0.014	251	5204	5066	1
	V-1	51	-0.002	ug/L	0.001	30	161	133	8
	Cr	52	-0.009	ug/L	0.043	468	15338	15044	0
	Cr	53	0.003	ug/L	0.006	204	120	122	8
	Mn	55	-0.036	ug/L	0.001	3	851	300	9
	Co	59	-0.000	ug/L	0.001	536	76	72	20
>	Ge	72		ug/L			436831	437663 ✓	1
	Ni	60	-0.002	ug/L	0.002	151	19	15	37
	Ni	62	0.061	ug/L	0.020	32	34	57	14
	Cu	63	-0.000	ug/L	0.001	581	79	78	8
	Cu	65	-0.003	ug/L	0.001	36	33	25	8
	Zn	66	-0.007	ug/L	0.008	115	137	125	9
	Zn	67	-0.027	ug/L	0.018	67	26	19	25
	Zn	68	0.005	ug/L	0.013	272	127	132	12
	As	75	-0.010	ug/L	0.008	76	255	241	3
	As-1	75	0.018	ug/L	0.125	693	8509	8550	1
	Se	82	-0.025	ug/L	0.055	218	6	2	399
	Se	78	0.090	ug/L	0.429	476	8644	8696	0
	Mo	98	0.013	ug/L	0.011	87	14	67	68
	Y	89		ug/L			278872	285551	1
	Kr	83		ug/L			509	517	5
>	In	115		ug/L			878990	867554 ✓	1
	Ag	107	0.004	ug/L	0.007	179	24	68	116
	Cd	111	0.004	ug/L	0.008	182	66	83	38
	Cd	114	0.003	ug/L	0.007	234	45	73	91
	Sb	121	0.049	ug/L	0.008	17	270	920	11
	Sb	123	0.050	ug/L	0.007	14	194	706	9
	Ba	135	-0.006	ug/L	0.005	76	45	21	85
	Ba	137	-0.006	ug/L	0.005	82	76	38	76
>	Tb	159		ug/L			958896	961137 ✓	0
	Tl	205	0.006	ug/L	0.006	102	228	385	41
	Pb	208	-0.002	ug/L	0.002	118	272	209	37
	Bi	209		ug/L			2065247	2044194	0
	Th	232	0.078	ug/L	0.004	4	1210	3945	4
	U	238	0.001	ug/L	0.001	207	68	90	49

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:18:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	639890	2
[	Be	9	0.180	ug/L	0.014	7	9	366	8
	C	13		ug/L			57054	63148	2
	Cl	37		ug/L			3021538	3015037	3
[>	Sc	45		ug/L			603049	641133	1
[	V	51	5.733	ug/L	0.122	2	5204	82322	3
[	V-1	51	5.821	ug/L	0.108	1	161	78068	2
[	Cr	52	6.570	ug/L	0.114	1	15338	92566	2
[	Cr	53	6.857	ug/L	0.112	1	120	9099	1
[	Mn	55	248.177	ug/L	8.136	3	851	3972359	2
[	Co	59	1.902	ug/L	0.063	3	76	23711	3
[>	Ge	72		ug/L			436831	460097	1
[	Ni	60	6.496	ug/L	0.053	0	19	18131	0
[	Ni	62	6.641	ug/L	0.166	2	34	2639	3
[	Cu	63	3.638	ug/L	0.044	1	79	22862	2
[	Cu	65	3.720	ug/L	0.148	3	33	10554	3
[	Zn	66	44.584	ug/L	0.830	1	137	74453	2
[	Zn	67	47.057	ug/L	1.139	2	26	12812	3
[	Zn	68	46.143	ug/L	0.552	1	127	55460	2
[	As	75	3.306	ug/L	0.016	0	255	5405	1
[	As-1	75	3.070	ug/L	0.072	2	8509	13727	0
[	Se	82	U 0.037	ug/L	0.056	148	6	12	72
[	Se	78	-0.822	ug/L	0.328	39	8644	8751	0
[	Mo	98	0.100	ug/L	0.005	5	14	462	4
	Y	89		ug/L			278872	324242	1
	Kr	83		ug/L			509	538	0
[>	In	115		ug/L			878990	917242	0
[	Ag	107	0.034	ug/L	0.001	2	24	463	3
[	Cd	111	0.462	ug/L	0.004	0	66	2134	1
[	Cd	114	0.433	ug/L	0.012	2	45	4850	3
[	Sb	121	U 0.016	ug/L	0.003	18	270	510	9
[	Sb	123	0.017	ug/L	0.003	16	194	384	8
[	Ba	135	82.687	ug/L	1.728	2	45	328910	2
[	Ba	137	81.131	ug/L	1.610	1	76	557337	2
[>	Tb	159		ug/L			958896	1030736	0
[	Tl	205	U 0.037	ug/L	0.003	9	228	1347	8
[	Pb	208	12.607	ug/L	0.253	2	272	494530	2
[	Bi	209		ug/L			2065247	2140804	0
[	Th	232	1.210	ug/L	0.030	2	1210	46545	2
[	U	238	0.145	ug/L	0.003	2	68	5587	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:22:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	661214	1
[	**Be**	**9**	**0.891**	ug/L	0.054	6	9	1835	5
	C	**13**		ug/L			57054	80072	5
	Cl	**37**		ug/L			3021538	3187636	3
[>	**Sc**	**45**		ug/L			603049	705496	0
[	**V**	**51**	**25.758**	ug/L	0.167	0	5204	385673	1
[	**V-1**	**51**	**25.897**	ug/L	0.204	0	161	381541	1
[	**Cr**	**52**	**30.350**	ug/L	0.541	1	15338	405557	1
[	**Cr**	**53**	**30.815**	ug/L	0.448	1	120	44506	1
[	**Mn**	**55**	**1079.796**	ug/L	20.740	1	851	19015205	1
[	**Co**	**59**	**8.537**	ug/L	0.102	1	76	116810	2
[>	**Ge**	**72**		ug/L			436831	455024	2
[	**Ni**	**60**	**31.745**	ug/L	0.853	2	19	87518	0
[	**Ni**	**62**	**33.010**	ug/L	0.326	0	34	12828	2
[	**Cu**	**63**	**17.622**	ug/L	0.602	3	79	109135	1
[	**Cu**	**65**	**18.202**	ug/L	0.321	1	33	50940	0
[	**Zn**	**66**	**210.322**	ug/L	4.463	2	137	346721	0
[	**Zn**	**67**	**226.685**	ug/L	2.147	0	26	60934	3
[	**Zn**	**68**	**217.996**	ug/L	3.300	1	127	258555	0
[	**As**	**75**	**16.254**	ug/L	0.224	1	255	25238	1
[	**As-1**	**75**	**16.010**	ug/L	0.377	2	8509	33435	0
[	**Se**	**82**	**-0.271**	ug/L	0.132	48	6	-38	54
[	**Se**	**78**	**-0.620**	ug/L	0.555	89	8644	8738	0
[	**Mo**	**98**	**0.510**	ug/L	0.008	1	14	2269	3
	Y	**89**		ug/L			278872	424122	1
	Kr	**83**		ug/L			509	843	4
[>	**In**	**115**		ug/L			878990	914187	1
[	**Ag**	**107**	**0.172**	ug/L	0.007	3	24	2223	2
[	**Cd**	**111**	**2.203**	ug/L	0.072	3	66	9871	3
[	**Cd**	**114**	**2.073**	ug/L	0.012	0	45	22988	1
[	**Sb**	**121**	**0.067**	ug/L	0.006	9	270	1226	7
[	**Sb**	**123**	**0.068**	ug/L	0.002	3	194	939	1
[	**Ba**	**135**	**418.950**	ug/L	2.768	0	45	1660660	1
[	**Ba**	**137**	**410.624**	ug/L	6.362	1	76	2810733	1
[>	**Tb**	**159**		ug/L			958896	1077726	0
[	**Tl**	**205**	**0.188**	ug/L	0.001	0	228	6089	0
[	**Pb**	**208**	**59.595**	ug/L	0.142	0	272	2443071	0
[	**Bi**	**209**		ug/L			2065247	2134406	0
[	**Th**	**232**	**5.631**	ug/L	0.023	0	1210	221502	0
[	**U**	**238**	**0.702**	ug/L	0.006	0	68	28002	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:26:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	656179	1
[	Be	9	0.904	ug/L	0.062	6	9	1846	5
	C	13		ug/L			57054	78922	3
	Cl	37		ug/L			3021538	3149823	2
[>	Sc	45		ug/L			603049	692661	1
	V	51	29.486	ug/L	0.737	2	5204	432545	2
	V-1	51	29.793	ug/L	0.610	2	161	430877	1
	Cr	52	29.958	ug/L	0.249	0	15338	393269	1
	Cr	53	30.964	ug/L	0.460	1	120	43906	1
	Mn	55	1003.489	ug/L	28.393	2	851	17347594	1
[	Co	59	8.706	ug/L	0.237	2	76	116924	2
[>	Ge	72		ug/L			436831	449419	2
	Ni	60	31.845	ug/L	1.517	4	19	86679	2
	Ni	62	34.021	ug/L	0.501	1	34	13055	1
	Cu	63	17.730	ug/L	0.178	1	79	108487	1
	Cu	65	18.178	ug/L	0.573	3	33	50236	0
	Zn	66	204.494	ug/L	4.836	2	137	332938	0
	Zn	67	217.911	ug/L	2.990	1	26	57839	1
	Zn	68	212.768	ug/L	4.228	1	127	249223	0
	As	75	15.373	ug/L	0.677	4	255	23579	1
	As-1	75	15.274	ug/L	0.825	5	8509	31895	1
	Se	82	-0.244	ug/L	0.037	15	6	-33	15
	Se	78	-0.075	ug/L	0.552	731	8644	8858	0
[	Mo	98	0.546	ug/L	0.017	3	14	2396	2
	Y	89		ug/L			278872	426007	1
	Kr	83		ug/L			509	830	2
[>	In	115		ug/L			878990	921088	1
	Ag	107	0.165	ug/L	0.004	2	24	2145	1
	Cd	111	2.002	ug/L	0.059	2	66	9042	1
	Cd	114	1.882	ug/L	0.027	1	45	21027	0
	Sb	121	0.056	ug/L	0.001	2	270	1087	2
	Sb	123	0.054	ug/L	0.001	1	194	788	1
	Ba	135	383.623	ug/L	5.036	1	45	1531978	0
[	Ba	137	379.538	ug/L	5.375	1	76	2617351	0
[>	Tb	159		ug/L			958896	1071181	1
	Tl	205	0.180	ug/L	0.003	1	228	5826	0
	Pb	208	54.650	ug/L	0.785	1	272	2226420	0
	Bi	209		ug/L			2065247	2100698	1
	Th	232	5.819	ug/L	0.109	1	1210	227402	0
[	U	238	0.681	ug/L	0.010	1	68	26996	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:30:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	665415	2
[	Be	9	26.774	ug/L	0.780	2	9	55190	0
	C	13		ug/L			57054	71221	1
	Cl	37		ug/L			3021538	3070987	3
[>	Sc	45		ug/L			603049	699358	2
[	V	51	55.618	ug/L	2.745	4	5204	817909	2
[	V-1	51	56.011	ug/L	2.566	4	161	817231	2
[	Cr	52	56.087	ug/L	1.275	2	15338	727745	2
[	Cr	53	57.371	ug/L	0.323	0	120	82018	2
[	Mn	55	1049.967	ug/L	31.200	2	851	18322632	0
[	Co	59	33.510	ug/L	0.954	2	76	454013	0
[>	Ge	72		ug/L			436831	461836	1
[	Ni	60	56.296	ug/L	0.203	0	19	157567	0
[	Ni	62	57.449	ug/L	0.598	1	34	22634	0
[	Cu	63	42.232	ug/L	0.528	1	79	265471	1
[	Cu	65	42.020	ug/L	0.210	0	33	119346	1
[	Zn	66	269.443	ug/L	2.808	1	137	450894	0
[	Zn	67	282.952	ug/L	2.287	0	26	77184	1
[	Zn	68	283.399	ug/L	4.306	1	127	341155	0
[	As	75	39.077	ug/L	0.718	1	255	61210	1
[	As-1	75	38.859	ug/L	0.535	1	8509	69543	0
[	Se	82	74.037	ug/L	0.740	0	6	12578	0
[	Se	78	73.866	ug/L	0.519	0	8644	40918	1
[	Mo	98	20.168	ug/L	0.390	1	14	90418	1
	Y	89		ug/L			278872	432510	0
	Kr	83		ug/L			509	844	3
[>	In	115		ug/L			878990	908843	0
[	Ag	107	21.379	ug/L	0.301	1	24	271019	1
[	Cd	111	27.019	ug/L	0.340	1	66	119590	1
[	Cd	114	26.722	ug/L	0.464	1	45	294006	1
[	Sb	121	1.284	ug/L	0.008	0	270	18307	1
[	Sb	123	1.267	ug/L	0.011	0	194	13842	0
[	Ba	135	417.476	ug/L	6.309	1	45	1645202	1
[	Ba	137	413.365	ug/L	2.872	0	76	2812964	0
[>	Tb	159		ug/L			958896	1077683	0
[	Tl	205	25.188	ug/L	0.180	0	228	782728	0
[	Pb	208	80.699	ug/L	0.530	0	272	3308011	0
[	Bi	209		ug/L			2065247	2080469	0
[	Th	232	32.137	ug/L	0.105	0	1210	1257725	0
[	U	238	26.584	ug/L	0.313	1	68	1057156	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:34:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	664429	2
[	Be	9	27.706	ug/L	1.450	5	9	57003	2
	C	13		ug/L			57054	78997	0
	Cl	37		ug/L			3021538	3183423	0
[>	Sc	45		ug/L			603049	697871	4
[	V	51	49.080	ug/L	1.426	2	5204	720918	2
[	V-1	51	49.523	ug/L	1.791	3	161	720828	1
[	Cr	52	53.272	ug/L	2.332	4	15338	689945	1
[	Cr	53	54.731	ug/L	3.737	6	120	77935	2
[	Mn	55	1087.992	ug/L	39.935	3	851	18934618	0
[	Co	59	32.198	ug/L	1.861	5	76	434786	1
[>	Ge	72		ug/L			436831	447471	0
[	Ni	60	57.664	ug/L	0.598	1	19	156375	0
[	Ni	62	57.868	ug/L	1.416	2	34	22088	1
[	Cu	63	42.279	ug/L	0.626	1	79	257483	0
[	Cu	65	43.677	ug/L	0.965	2	33	120179	1
[	Zn	66	289.984	ug/L	2.084	0	137	470218	1
[	Zn	67	293.612	ug/L	0.444	0	26	77597	0
[	Zn	68	296.692	ug/L	6.923	2	127	346040	1
[	As	75	42.257	ug/L	0.578	1	255	64114	0
[	As-1	75	41.744	ug/L	0.529	1	8509	71740	1
[	Se	82	82.625	ug/L	1.009	1	6	13600	0
[	Se	78	81.406	ug/L	0.798	0	8644	42790	1
[	Mo	98	24.092	ug/L	0.558	2	14	104647	1
	Y	89		ug/L			278872	412249	0
	Kr	83		ug/L			509	819	3
[>	In	115		ug/L			878990	910642	1
[	Ag	107	22.960	ug/L	0.625	2	24	291574	1
[	Cd	111	27.932	ug/L	0.361	1	66	123861	0
[	Cd	114	27.555	ug/L	0.531	1	45	303741	1
[	Sb	121	24.720	ug/L	0.251	1	270	348119	0
[	Sb	123	24.301	ug/L	0.240	0	194	262260	1
[	Ba	135	423.194	ug/L	2.141	0	45	1671012	1
[	Ba	137	422.360	ug/L	7.180	1	76	2879593	1
[>	Tb	159		ug/L			958896	1055026	2
[	Tl	205	26.460	ug/L	0.752	2	228	804674	0
[	Pb	208	84.912	ug/L	1.613	1	272	3406590	0
[	Bi	209		ug/L			2065247	2067427	2
[	Th	232	31.766	ug/L	0.597	1	1210	1216784	0
[	U	238	27.521	ug/L	0.860	3	68	1071031	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:39:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

r Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	675414	3
[	Be	9	0.542	ug/L	0.030	5	9	1143	2
	C	13		ug/L			57054	86880	1
	Cl	37		ug/L			3021538	3193829	2
[>	Sc	45		ug/L			603049	696641	2
[	V	51	26.327	ug/L	0.648	2	5204	388939	1
[	V-1	51	26.439	ug/L	0.638	2	161	384464	1
[	Cr	52	16.570	ug/L	0.341	2	15338	226612	1
[	Cr	53	16.912	ug/L	0.304	1	120	24176	1
[	Mn	55	1303.681	ug/L	57.982	4	851	22652062	1
[	Co	59	6.709	ug/L	0.135	2	76	90621	1
[>	Ge	72		ug/L			436831	456270	0
[	Ni	60	13.392	ug/L	0.107	0	19	37046	0
[	Ni	62	14.435	ug/L	0.308	2	34	5645	2
[	Cu	63	16.488	ug/L	0.147	0	79	102445	1
[	Cu	65	16.761	ug/L	0.560	3	33	47048	3
[	Zn	66	266.483	ug/L	4.305	1	137	440579	1
[	Zn	67	262.136	ug/L	3.983	1	26	70639	0
[	Zn	68	273.469	ug/L	1.994	0	127	325283	1
[	As	75	17.506	ug/L	0.109	0	255	27240	0
[	As-1	75	17.276	ug/L	0.110	0	8509	35483	0
[	Se	82	-0.032	ug/L	0.056	176	6	1	803
[	Se	78	-0.644	ug/L	0.199	30	8644	8755	1
[	Mo	98	0.415	ug/L	0.012	2	14	1854	3
	Y	89		ug/L			278872	382056	0
	Kr	83		ug/L			509	680	1
[>	In	115		ug/L			878990	960013	0
[	Ag	107	0.112	ug/L	0.007	5	24	1522	5
[	Cd	111	5.082	ug/L	0.027	0	66	23818	0
[	Cd	114	5.124	ug/L	0.075	1	45	59585	1
[	Sb	121	0.367	ug/L	0.008	2	270	5741	2
[	Sb	123	0.360	ug/L	0.006	1	194	4305	1
[	Ba	135	332.012	ug/L	2.481	0	45	1381993	0
[	Ba	137	330.181	ug/L	7.446	2	76	2373308	1
[>	Tb	159		ug/L			958896	1068088	0
[	Tl	205	0.327	ug/L	0.005	1	228	10328	1
[	Pb	208	238.573	ug/L	1.715	0	272	9691575	0
[	Bi	209		ug/L			2065247	2168153	0
[	Th	232	5.576	ug/L	0.049	0	1210	217380	0
[	U	238	0.520	ug/L	0.004	0	68	20581	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:43:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	665043	1
[	Be	9	0.759	ug/L	0.026	3	9	1573	4
	C	13		ug/L			57054	83568	1
	Cl	37		ug/L			3021538	3116959	1
[>	Sc	45		ug/L			603049	691985	2
[	V	51	24.848	ug/L	0.604	2	5204	364978	0
[	V-1	51	25.010	ug/L	0.850	3	161	361223	1
[	Cr	52	21.536	ug/L	0.149	0	15338	287366	2
[	Cr	53	22.060	ug/L	0.912	4	120	31271	2
[	Mn	55	738.989	ug/L	21.750	2	851	12759774	0
[	Co	59	6.675	ug/L	0.231	3	76	89536	0
[>	Ge	72		ug/L			436831	456752	0
[	Ni	60	20.317	ug/L	0.307	1	19	56253	1
[	Ni	62	21.587	ug/L	0.184	0	34	8434	0
[	Cu	63	18.348	ug/L	0.245	1	79	114109	1
[	Cu	65	18.519	ug/L	0.315	1	33	52039	1
[	Zn	66	86.660	ug/L	0.684	0	137	143530	0
[	Zn	67	105.288	ug/L	2.289	2	26	28422	2
[	Zn	68	96.403	ug/L	0.238	0	127	114872	0
[	As	75	6.826	ug/L	0.121	1	255	10795	1
[	As-1	75	6.592	ug/L	0.098	1	8509	19057	0
[	Se	82	-0.161	ug/L	0.037	23	6	-20	30
[	Se	78	-0.566	ug/L	0.084	14	8644	8797	0
[	Mo	98	0.349	ug/L	0.004	1	14	1563	1
	Y	89		ug/L			278872	439261	1
	Kr	83		ug/L			509	780	6
[>	In	115		ug/L			878990	907986	0
[	Ag	107	0.131	ug/L	0.005	3	24	1688	4
[	Cd	111	0.709	ug/L	0.015	2	66	3204	2
[	Cd	114	0.591	ug/L	0.016	2	45	6540	2
[	Sb	121	0.048	ug/L	0.000	0	270	948	0
[	Sb	123	0.049	ug/L	0.005	10	194	727	6
[	Ba	135	329.117	ug/L	6.643	2	45	1295678	1
[	Ba	137	325.155	ug/L	1.741	0	76	2210619	0
[>	Tb	159		ug/L			958896	1061463	0
[	Tl	205	0.138	ug/L	0.004	2	228	4466	2
[	Pb	208	32.415	ug/L	0.287	0	272	1308875	0
[	Bi	209		ug/L			2065247	2108698	0
[	Th	232	5.728	ug/L	0.064	1	1210	221892	0
[	U	238	1.196	ug/L	0.017	1	68	46916	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:47:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	652724	1
	Be	9	0.498	ug/L	0.010	1	9	1017	0
	C	13		ug/L			57054	80677	2
	Cl	37		ug/L			3021538	3121012	0
>	Sc	45		ug/L			603049	683577	1
	V	51	18.200	ug/L	0.341	1	5204	265743	1
	V-1	51	18.293	ug/L	0.413	2	161	261161	1
	Cr	52	12.225	ug/L	0.142	1	15338	168657	1
	Cr	53	12.514	ug/L	0.190	1	120	17592	0
	Mn	55	1093.742	ug/L	11.264	1	851	18665780	2
	Co	59	4.802	ug/L	0.018	0	76	63698	0
>	Ge	72		ug/L			436831	461143	1
	Ni	60	13.477	ug/L	0.144	1	19	37679	1
	Ni	62	14.269	ug/L	0.268	1	34	5639	1
	Cu	63	10.156	ug/L	0.391	3	79	63786	2
	Cu	65	10.545	ug/L	0.260	2	33	29926	1
	Zn	66	148.411	ug/L	0.698	0	137	248057	0
	Zn	67	166.297	ug/L	2.464	1	26	45299	0
	Zn	68	162.948	ug/L	3.309	2	127	195909	1
	As	75	6.130	ug/L	0.091	1	255	9815	0
	As-1	75	5.833	ug/L	0.179	3	8509	18056	0
	Se	82	-0.101	ug/L	0.089	87	6	-10	141
	Se	78	-0.925	ug/L	0.321	34	8644	8726	0
	Mo	98	0.311	ug/L	0.005	1	14	1405	2
	Y	89		ug/L			278872	373026	1
	Kr	83		ug/L			509	683	5
>	In	115		ug/L			878990	932356	1
	Ag	107	0.123	ug/L	0.003	2	24	1625	3
	Cd	111	1.453	ug/L	0.049	3	66	6662	2
	Cd	114	1.370	ug/L	0.004	0	45	15511	1
	Sb	121	0.051	ug/L	0.001	2	270	1028	1
	Sb	123	0.054	ug/L	0.002	4	194	800	3
	Ba	135	419.789	ug/L	2.337	0	45	1697017	0
	Ba	137	413.188	ug/L	13.083	3	76	2883882	2
>	Tb	159		ug/L			958896	1051314	1
	Tl	205	0.144	ug/L	0.001	1	228	4628	0
	Pb	208	66.661	ug/L	1.078	1	272	2665360	0
	Bi	209		ug/L			2065247	2137223	1
	Th	232	3.789	ug/L	0.059	1	1210	145806	0
	U	238	0.460	ug/L	0.008	1	68	17899	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:52:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag, V, Cr, Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	668100	0
	Be	9	0.969	ug/L	0.018	1	9	2015	2
	C	13		ug/L			57054	86720	1
	Cl	37		ug/L			3021538	3117146	1
>	Sc	45		ug/L			603049	727232	1
	V	51	34.773	ug/L	0.481	1	5204	534469	1
	V-1	51	35.084	ug/L	0.393	1	161	532744	1
	Cr	52	60.790	ug/L	1.365	2	15338	818683	1
	Cr	53	61.867	ug/L	0.665	1	120	91959	0
	Mn	55	1306.034	ug/L	18.637	1	851	23709508	1
	Co	59	10.865	ug/L	0.145	1	76	153185	0
>	Ge	72		ug/L			436831	452436	1
	Ni	60	57.991	ug/L	1.085	1	19	158982	0
	Ni	62	61.884	ug/L	0.114	0	34	23884	1
	Cu	63	22.498	ug/L	0.696	3	79	138536	1
	Cu	65	22.506	ug/L	0.110	0	33	62636	1
	Zn	66	282.766	ug/L	6.666	2	137	463488	1
	Zn	67	295.755	ug/L	4.246	1	26	79037	2
	Zn	68	297.704	ug/L	7.854	2	127	351024	1
	As	75	15.755	ug/L	0.446	2	255	24331	2
	As-1	75	15.538	ug/L	0.544	3	8509	32526	1
	Se	82	u -0.270	ug/L	0.071	26	6	-38	31
	Se	78	-0.617	ug/L	0.590	95	8644	8690	1
	Mo	98	0.483	ug/L	0.019	3	14	2134	2
	Y	89		ug/L			278872	395486	1
	Kr	83		ug/L			509	786	1
>	In	115		ug/L			878990	911151	0
	Ag	107	0.162	ug/L	0.002	1	24	2080	0
	Cd	111	4.159	ug/L	0.027	0	66	18515	1
	Cd	114	4.070	ug/L	0.036	0	45	44932	0
	Sb	121	u 0.046	ug/L	0.001	2	270	934	2
	Sb	123	0.050	ug/L	0.003	5	194	738	3
	Ba	135	467.691	ug/L	5.446	1	45	1847758	1
	Ba	137	460.990	ug/L	1.948	0	76	3145110	0
>	Tb	159		ug/L			958896	1067974	0
	Tl	205	0.240	ug/L	0.004	1	228	7656	0
	Pb	208	180.359	ug/L	0.915	0	272	7325986	0
	Bi	209		ug/L			2065247	2097628	0
	Th	232	5.726	ug/L	0.066	1	1210	223154	0
	U	238	0.564	ug/L	0.013	2	68	22307	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 18:56:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

nr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	667594	1
	Be	9	0.531	ug/L	0.006	1	9	1109	1
	C	13		ug/L			57054	83532	4
	Cl	37		ug/L			3021538	3176588	2
>	Sc	45		ug/L			603049	687264 ✓	2
	V	51	18.989	ug/L	0.642	3	5204	278399	1
	V-1	51	19.100	ug/L	0.600	3	161	274053	1
	Cr	52	12.526	ug/L	0.407	3	15338	173261	1
	Cr	53	12.874	ug/L	0.271	2	120	18188	0
	Mn	55	1034.710	ug/L	6.483	0	851	17751854	1
	Co	59	4.966	ug/L	0.130	2	76	66201	0
>	Ge	72		ug/L			436831	460712	1
	Ni	60	11.570	ug/L	0.256	2	19	32313	1
	Ni	62	12.796	ug/L	0.454	3	34	5055	2
	Cu	63	10.473	ug/L	0.231	2	79	65716	0
	Cu	65	10.520	ug/L	0.338	3	33	29819	1
	Zn	66	130.355	ug/L	2.877	2	137	217647	1
	Zn	67	142.595	ug/L	2.220	1	26	38809	1
	Zn	68	135.644	ug/L	2.996	2	127	162931	0
	As	75	13.043	ug/L	0.350	2	255	20555	0
	As-1	75	12.848	ug/L	0.436	3	8509	28938	0
	Se	82	-0.030	ug/L	0.053	174	6	1	675
	Se	78	-0.533	ug/L	0.440	82	8644	8886	0
	Mo	98	0.416	ug/L	0.009	2	14	1873	1
	Y	89		ug/L			278872	376401	2
	Kr	83		ug/L			509	669	2
>	In	115		ug/L			878990	927294	1
	Ag	107	0.088	ug/L	0.004	4	24	1167	2
	Cd	111	1.668	ug/L	0.021	1	66	7598	0
	Cd	114	1.571	ug/L	0.033	2	45	17676	1
	Sb	121	0.093	ug/L	0.006	6	270	1622	4
	Sb	123	0.095	ug/L	0.009	9	194	1243	6
	Ba	135	292.135	ug/L	6.007	2	45	1174384	0
	Ba	137	293.978	ug/L	2.247	0	76	2041337	2
>	Tb	159		ug/L			958896	1062277	1
	Tl	205	0.151	ug/L	0.005	2	228	4869	1
	Pb	208	74.996	ug/L	1.175	1	272	3029963	0
	Bi	209		ug/L			2065247	2146678	0
	Th	232	4.984	ug/L	0.143	2	1210	193370	1
	U	238	0.628	ug/L	0.013	1	68	24676	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:00:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	622127 ✓	1
	Be	9	55.023	ug/L	0.404	0	9	106084	1
	C	13		ug/L			57054	56636	2
	Cl	37		ug/L			3021538	3084122	0
>	Sc	45		ug/L			603049	637033 ✓	0
	V	51	49.171	ug/L	0.719	1	5204	659752	1
	V-1	51	49.706	ug/L	0.712	1	161	661068	1
	Cr	52	49.569	ug/L	0.205	0	15338	587860	1
	Cr	53	51.322	ug/L	0.302	0	120	66849	0
	Mn	55	48.994	ug/L	1.108	2	851	780068	2
	Co	59	50.318	ug/L	0.704	1	76	621209	1
>	Ge	72		ug/L			436831	448026 ✓	1
	Ni	60	48.909	ug/L	1.333	2	19	132773	1
	Ni	62	48.932	ug/L	1.491	3	34	18707	3
	Cu	63	49.609	ug/L	1.000	2	79	302503	2
	Cu	65	49.436	ug/L	0.699	1	33	136187	0
	Zn	66	50.375	ug/L	1.295	2	137	81911	3
	Zn	67	51.577	ug/L	0.958	1	26	13669	1
	Zn	68	50.823	ug/L	0.639	1	127	59464	1
	As	75	49.934	ug/L	0.541	1	255	75812	1
	As-1	75	49.902	ug/L	0.566	1	8509	84158	1
	Se	82	50.689	ug/L	0.615	1	6	8356	1
	Se	78	50.583	ug/L	0.893	1	8644	29974	0
	Mo	98	45.686	ug/L	0.858	1	14	198668	0
	Y	89		ug/L			278872	293801	1
	Kr	83		ug/L			509	548	1
>	In	115		ug/L			878990	891368 ✓	1
	Ag	107	44.611	ug/L	1.417	3	24	554663	3
	Cd	111	50.809	ug/L	0.815	1	66	220479	1
	Cd	114	50.505	ug/L	0.875	1	45	544878	0
	Sb	121	50.313	ug/L	0.848	1	270	693204	1
	Sb	123	50.325	ug/L	0.735	1	194	531411	1
	Ba	135	50.278	ug/L	0.937	1	45	194325	0
	Ba	137	49.569	ug/L	0.756	1	76	330853	0
>	Tb	159		ug/L			958896	1005356 ✓	1
	Tl	205	51.592	ug/L	1.482	2	228	1495090	2
	Pb	208	50.711	ug/L	0.953	1	272	1938910	0
	Bi	209		ug/L			2065247	2074045	1
	Th	232	51.931	ug/L	0.564	1	1210	1894960	0
	U	238	52.825	ug/L	1.228	2	68	1959116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:07:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	624563 ✓	3
	Be	9	-0.002	ug/L	0.001	67	9	5	47
	C	13		ug/L			57054	58796	3
	Cl	37		ug/L			3021538	3039274	0
>	Sc	45		ug/L			603049	606912 ✓	1
	V	51	-0.002	ug/L	0.008	342	5204	5207	0
	V-1	51	-0.003	ug/L	0.003	103	161	129	28
	Cr	52	0.003	ug/L	0.027	1022	15338	15463	0
	Cr	53	0.002	ug/L	0.006	365	120	123	7
	Mn	55	-0.019	ug/L	0.021	106	851	566	56
	Co	59	-0.000	ug/L	0.002	880	76	74	33
>	Ge	72		ug/L			436831	435709 ✓	0
	Ni	60	0.005	ug/L	0.004	84	19	33	34
	Ni	62	0.035	ug/L	0.024	69	34	47	19
	Cu	63	0.002	ug/L	0.004	192	79	91	25
	Cu	65	0.000	ug/L	0.004	2557	33	33	30
	Zn	66	0.021	ug/L	0.027	125	137	170	25
	Zn	67	-0.014	ug/L	0.030	214	26	23	33
	Zn	68	0.020	ug/L	0.034	168	127	149	26
	As	75	0.008	ug/L	0.029	376	255	266	16
	As-1	75	0.043	ug/L	0.047	109	8509	8550	1
	Se	82	-0.003	ug/L	0.068	2146	6	5	190
	Se	78	0.173	ug/L	0.187	107	8644	8692	1
	Mo	98	0.007	ug/L	0.002	35	14	42	23
	Y	89		ug/L			278872	279515	1
	Kr	83		ug/L			509	534	5
>	In	115		ug/L			878990	870478 ✓	1
	Ag	107	0.001	ug/L	0.001	83	24	38	28
	Cd	111	-0.001	ug/L	0.002	218	66	61	13
	Cd	114	-0.001	ug/L	0.001	166	45	36	32
	Sb	121	0.039	ug/L	0.003	7	270	789	6
	Sb	123	0.042	ug/L	0.004	8	194	624	5
	Ba	135	-0.002	ug/L	0.005	255	45	37	48
	Ba	137	-0.001	ug/L	0.006	750	76	69	58
>	Tb	159		ug/L			958896	946388 ✓	0
	Tl	205	0.003	ug/L	0.005	166	228	301	41
	Pb	208	-0.001	ug/L	0.002	323	272	247	28
	Bi	209		ug/L			2065247	2058186	2
	Th	232	0.061	ug/L	0.005	8	1210	3282	6
	U	238	-0.000	ug/L	0.001	310	68	58	51

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:11:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

nr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	620054	1
	Be	9	0.003	ug/L	0.004	160	9	14	58
	C	13		ug/L			57054	62399	4
	Cl	37		ug/L			3021538	3090649	0
>	Sc	45		ug/L			603049	617754	1
	V	51	< 0.001	ug/L	0.018	2001	5204	5340	2
	V-1	51	0.001	ug/L	0.010	683	161	183	69
	Cr	52	< -0.005	ug/L	0.042	843	15338	15650	1
	Cr	53	-0.003	ug/L	0.008	261	120	119	9
	Mn	55	0.117	ug/L	0.221	189	851	2663	127
	Co	59	< 0.004	ug/L	0.006	144	76	128	56
>	Ge	72		ug/L			436831	435872	0
	Ni	60	< 0.006	ug/L	0.008	146	19	35	64
	Ni	62	0.006	ug/L	0.008	146	34	36	8
	Cu	63	< 0.015	ug/L	0.005	35	79	166	18
	Cu	65	0.017	ug/L	0.006	34	33	77	20
	Zn	66	< 0.236	ug/L	0.027	11	137	510	8
	Zn	67	0.194	ug/L	0.072	37	26	76	24
	Zn	68	0.233	ug/L	0.041	17	127	391	12
	As	75	< 0.003	ug/L	0.013	406	255	259	7
	As-1	75	0.146	ug/L	0.033	22	8509	8705	0
	Se	82	< -0.035	ug/L	0.102	293	6	0	2289
	Se	78	0.547	ug/L	0.093	17	8644	8847	0
	Mo	98	0.002	ug/L	0.002	101	14	22	37
	Y	89		ug/L			278872	286809	0
	Kr	83		ug/L			509	542	6
>	In	115		ug/L			878990	883860	0
	Ag	107	0.002	ug/L	0.003	150	24	48	74
	Cd	111	< 0.003	ug/L	0.002	70	66	80	11
	Cd	114	0.001	ug/L	0.003	233	45	60	58
	Sb	121	< 0.002	ug/L	0.006	305	270	299	28
	Sb	123	0.004	ug/L	0.006	170	194	235	29
	Ba	135	0.034	ug/L	0.058	170	45	177	126
	Ba	137	0.029	ug/L	0.053	181	76	272	130
>	Tb	159		ug/L			958896	971400	0
	Tl	205	< 0.003	ug/L	0.007	260	228	307	64
	Pb	208	< 0.018	ug/L	0.021	116	272	947	82
	Bi	209		ug/L			2065247	2091724	0
	Th	232	0.051	ug/L	0.011	21	1210	3005	13
	U	238	0.001	ug/L	0.005	350	68	116	140

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:

rr Ag, Be

Sample Date/Time: Thursday, November 15, 2012 19:16:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637177	1
	Be	9	27.746	ug/L	0.182	0	9	54791	2
	C	13		ug/L			57054	59693	0
	Cl	37		ug/L			3021538	3042109	3
>	Sc	45		ug/L			603049	628614	1
	V	51	25.376	ug/L	0.041	0	5204	338631	1
	V-1	51	25.518	ug/L	0.098	0	161	334978	0
	Cr	52	25.556	ug/L	0.163	0	15338	306802	0
	Cr	53	26.020	ug/L	0.554	2	120	33500	1
	Mn	55	25.683	ug/L	0.640	2	851	403911	2
	Co	59	25.930	ug/L	0.028	0	76	315938	1
>	Ge	72		ug/L			436831	445162	1
	Ni	60	25.555	ug/L	0.561	2	19	68952	2
	Ni	62	25.622	ug/L	0.155	0	34	9750	1
	Cu	63	26.070	ug/L	0.372	1	79	157981	0
	Cu	65	26.586	ug/L	0.635	2	33	72785	1
	Zn	66	82.824	ug/L	3.099	3	137	133675	2
	Zn	67	76.468	ug/L	2.835	3	26	20120	2
	Zn	68	81.568	ug/L	2.335	2	127	94730	1
	As	75	24.851	ug/L	0.258	1	255	37618	0
	As-1	75	24.922	ug/L	0.596	2	8509	46100	1
	Se	82	79.897	ug/L	1.241	1	6	13083	0
	Se	78	80.307	ug/L	1.827	2	8644	42107	0
	Mo	98	22.397	ug/L	0.317	1	14	96787	0
	Y	89		ug/L			278872	291807	2
	Kr	83		ug/L			509	539	1
>	In	115		ug/L			878990	902557	1
	Ag	107	22.924	ug/L	0.462	2	24	288557	0
	Cd	111	24.972	ug/L	0.625	2	66	109753	1
	Cd	114	24.824	ug/L	0.470	1	45	271215	1
	Sb	121	24.852	ug/L	0.264	1	270	346865	0
	Sb	123	24.675	ug/L	0.527	2	194	263903	1
	Ba	135	25.342	ug/L	0.503	1	45	99209	1
	Ba	137	25.067	ug/L	0.489	1	76	169450	0
>	Tb	159		ug/L			958896	985357	0
	Tl	205	27.321	ug/L	0.153	0	228	776267	0
	Pb	208	27.023	ug/L	0.263	0	272	1012974	0
	Bi	209		ug/L			2065247	2118823	0
	Th	232	26.735	ug/L	0.520	1	1210	956859	1
	U	238	27.094	ug/L	0.337	1	68	985089	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:20:09

rr Be, Ag

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	661620	1
[	Be	9	0.571	ug/L	0.025	4	9	1179	3
	C	13		ug/L			57054	78067	1
	Cl	37		ug/L			3021538	3081139	2
[>	Sc	45		ug/L			603049	684121	3
	V	51	22.772	ug/L	0.457	2	5204	331172	1
	V-1	51	22.970	ug/L	0.491	2	161	328029	1
	Cr	52	15.871	ug/L	0.654	4	15338	213801	1
	Cr	53	16.503	ug/L	0.744	4	120	23154	1
	Mn	55	713.947	ug/L	29.223	4	851	12182391	0
[	Co	59	5.301	ug/L	0.219	4	76	70299	0
[>	Ge	72		ug/L			436831	468592	2
	Ni	60	13.049	ug/L	0.354	2	19	37061	0
	Ni	62	14.537	ug/L	0.705	4	34	5836	3
	Cu	63	10.546	ug/L	0.202	1	79	67308	0
	Cu	65	11.027	ug/L	0.160	1	33	31798	1
	Zn	66	84.842	ug/L	2.196	2	137	144111	0
	Zn	67	93.890	ug/L	1.089	1	26	26005	2
	Zn	68	89.803	ug/L	3.154	3	127	109734	1
	As	75	7.220	ug/L	0.106	1	255	11698	1
	As-1	75	6.945	ug/L	0.218	3	8509	20104	1
	Se	82	-0.090	ug/L	0.060	67	6	-8	116
	Se	78	-0.796	ug/L	0.393	49	8644	8923	0
[	Mo	98	0.350	ug/L	0.009	2	14	1606	2
	Y	89		ug/L			278872	404829	2
	Kr	83		ug/L			509	718	0
[>	In	115		ug/L			878990	920986	1
	Ag	107	0.073	ug/L	0.006	7	24	968	5
	Cd	111	0.685	ug/L	0.045	6	66	3139	4
	Cd	114	0.598	ug/L	0.012	1	45	6717	0
	Sb	121	0.059	ug/L	0.007	11	270	1124	7
	Sb	123	0.063	ug/L	0.009	13	194	887	9
	Ba	135	214.642	ug/L	3.774	1	45	857051	1
[	Ba	137	211.558	ug/L	5.020	2	76	1458544	0
[>	Tb	159		ug/L			958896	1041421	0
	Tl	205	0.151	ug/L	0.007	4	228	4795	4
	Pb	208	52.188	ug/L	0.316	0	272	2067388	0
	Bi	209		ug/L			2065247	2127321	0
	Th	232	5.435	ug/L	0.077	1	1210	206630	1
[	U	238	0.786	ug/L	0.012	1	68	30262	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:24:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	669928	1
[	Be	9	0.536	ug/L	0.022	4	9	1122	3
	C	13		ug/L			57054	83548	2
	Cl	37		ug/L			3021538	3125573	1
[>	Sc	45		ug/L			603049	699386	1
[	V	51	19.592	ug/L	0.216	1	5204	292259	1
[	V-1	51	19.639	ug/L	0.150	0	161	286888	1
[	Cr	52	13.286	ug/L	0.465	3	15338	186005	3
[	Cr	53	13.425	ug/L	0.174	1	120	19300	1
[	Mn	55	826.523	ug/L	27.862	3	851	14427328	2
[	Co	59	4.621	ug/L	0.077	1	76	62715	1
[>	Ge	72		ug/L			436831	460122	0
[	Ni	60	11.961	ug/L	0.407	3	19	33374	3
[	Ni	62	13.230	ug/L	0.040	0	34	5221	0
[	Cu	63	9.634	ug/L	0.034	0	79	60396	0
[	Cu	65	10.019	ug/L	0.164	1	33	28378	1
[	Zn	66	59.464	ug/L	1.703	2	137	99255	2
[	Zn	67	74.523	ug/L	1.159	1	26	20272	1
[	Zn	68	68.100	ug/L	0.753	1	127	81785	1
[	As	75	4.577	ug/L	0.064	1	255	7381	1
[	As-1	75	4.365	ug/L	0.127	2	8509	15739	1
[	Se	82	-0.115	ug/L	0.062	53	6	-12	81
[	Se	78	-0.557	ug/L	0.257	46	8644	8866	1
[	Mo	98	0.356	ug/L	0.002	0	14	1603	0
	Y	89		ug/L			278872	397073	1
	Kr	83		ug/L			509	721	3
[>	In	115		ug/L			878990	922652	1
[	Ag	107	0.081	ug/L	0.002	2	24	1072	3
[	Cd	111	0.468	ug/L	0.013	2	66	2171	2
[	Cd	114	0.410	ug/L	0.011	2	45	4630	1
[	Sb	121	0.031	ug/L	0.002	7	270	722	3
[	Sb	123	0.034	ug/L	0.006	16	194	571	9
[	Ba	135	234.694	ug/L	3.143	1	45	938848	0
[	Ba	137	239.625	ug/L	2.929	1	76	1655343	0
[>	Tb	159		ug/L			958896	1065594	1
[	Tl	205	0.109	ug/L	0.005	4	228	3608	2
[	Pb	208	21.591	ug/L	0.482	2	272	875095	0
[	Bi	209		ug/L			2065247	2134801	0
[	Th	232	4.798	ug/L	0.086	1	1210	186771	0
[	U	238	0.760	ug/L	0.022	2	68	29937	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:28:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	657865	0
[	Be	9	0.538	ug/L	0.026	4	9	1106	5
	C	13		ug/L			57054	72184	1
	Cl	37		ug/L			3021538	3073208	1
[>	Sc	45		ug/L			603049	676726	1
|	V	51	21.170	ug/L	0.626	2	5204	305009	1
|	V-1	51	21.332	ug/L	0.594	2	161	301438	2
|	Cr	52	14.128	ug/L	0.531	3	15338	190222	1
|	Cr	53	14.643	ug/L	0.290	1	120	20353	0
|	Mn	55	294.629	ug/L	9.357	3	851	4976355	1
[	Co	59	4.970	ug/L	0.048	0	76	65264	2
[>	Ge	72		ug/L			436831	457772	1
|	Ni	60	12.163	ug/L	0.489	4	19	33751	2
|	Ni	62	13.276	ug/L	0.422	3	34	5212	3
|	Cu	63	11.692	ug/L	0.305	2	79	72897	1
|	Cu	65	11.791	ug/L	0.422	3	33	33212	2
|	Zn	66	43.020	ug/L	1.000	2	137	71471	1
|	Zn	67	51.921	ug/L	0.666	1	26	14060	1
|	Zn	68	47.739	ug/L	1.263	2	127	57068	1
|	As	75	3.181	ug/L	0.037	1	255	5186	2
|	As-1	75	3.012	ug/L	0.047	1	8509	13570	1
|	Se	82	-0.085	ug/L	0.061	71	6	-7	133
|	Se	78	-0.342	ug/L	0.038	11	8644	8913	1
[	Mo	98	0.252	ug/L	0.012	4	14	1133	3
	Y	89		ug/L			278872	400676	1
	Kr	83		ug/L			509	729	2
[>	In	115		ug/L			878990	914511	0
|	Ag	107	0.100	ug/L	0.001	1	24	1303	0
|	Cd	111	0.295	ug/L	0.022	7	66	1383	6
|	Cd	114	0.197	ug/L	0.005	2	45	2227	3
|	Sb	121	<0.017	ug/L	0.003	17	270	518	8
|	Sb	123	0.017	ug/L	0.003	19	194	388	9
|	Ba	135	141.552	ug/L	1.158	0	45	561300	0
[	Ba	137	140.913	ug/L	1.413	1	76	964999	1
[>	Tb	159		ug/L			958896	1036798	1
|	Tl	205	< 0.089	ug/L	0.001	1	228	2894	2
|	Pb	208	8.899	ug/L	0.145	1	272	351159	0
|	Bi	209		ug/L			2065247	2102953	1
|	Th	232	4.970	ug/L	0.084	1	1210	188211	0
[	U	238	0.885	ug/L	0.011	1	68	33930	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:32:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	653961	1
	Be	**9**	**0.451**	ug/L	0.030	6	9	924	8
	C	**13**		ug/L			57054	68265	0
	Cl	**37**		ug/L			3021538	3127098	3
>	**Sc**	**45**		ug/L			603049	691582	1
	V	**51**	**22.837**	ug/L	0.414	1	5204	335837	1
	V-1	**51**	**22.965**	ug/L	0.404	1	161	331657	1
	Cr	**52**	**14.833**	ug/L	0.234	1	15338	203287	1
	Cr	**53**	**15.233**	ug/L	0.222	1	120	21634	0
	Mn	**55**	**264.972**	ug/L	11.276	4	851	4574139	3
	Co	**59**	**4.892**	ug/L	0.153	3	76	65636	2
>	**Ge**	**72**		ug/L			436831	464017	0
	Ni	**60**	**12.393**	ug/L	0.135	1	19	34866	0
	Ni	**62**	**13.514**	ug/L	0.198	1	34	5378	1
	Cu	**63**	**10.776**	ug/L	0.245	2	79	68125	2
	Cu	**65**	**11.076**	ug/L	0.148	1	33	31631	0
	Zn	**66**	**36.820**	ug/L	0.380	1	137	62038	1
	Zn	**67**	**45.338**	ug/L	1.670	3	26	12448	3
	Zn	**68**	**40.521**	ug/L	0.794	1	127	49133	2
	As	**75**	**3.471**	ug/L	0.064	1	255	5711	1
	As-1	**75**	**3.186**	ug/L	0.111	3	8509	14026	1
	Se	**82**	u **-0.069**	ug/L	0.057	82	6	-5	187
	Se	**78**	**-0.805**	ug/L	0.234	29	8644	8834	1
	Mo	**98**	**0.265**	ug/L	0.013	4	14	1207	4
	Y	**89**		ug/L			278872	393585	1
	Kr	**83**		ug/L			509	708	4
>	**In**	**115**		ug/L			878990	906983	1
	Ag	**107**	**0.078**	ug/L	0.003	4	24	1017	3
	Cd	**111**	**0.222**	ug/L	0.014	6	66	1047	6
	Cd	**114**	**0.123**	ug/L	0.006	4	45	1399	3
	Sb	**121**	u **0.001**	ug/L	0.000	27	270	295	2
	Sb	**123**	**0.003**	ug/L	0.002	88	194	229	10
	Ba	**135**	**104.402**	ug/L	3.803	3	45	410465	2
	Ba	**137**	**103.603**	ug/L	1.346	1	76	703567	0
>	**Tb**	**159**		ug/L			958896	1041447	0
	Tl	**205**	u **0.079**	ug/L	0.003	3	228	2624	3
	Pb	**208**	**8.498**	ug/L	0.025	0	272	336903	0
	Bi	**209**		ug/L			2065247	2107307	0
	Th	**232**	**5.765**	ug/L	0.016	0	1210	219092	0
	U	**238**	**0.832**	ug/L	0.007	0	68	32063	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:36:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652789	0
[	Be	9	0.439	ug/L	0.017	3	9	898	3
	C	13		ug/L			57054	80698	0
	Cl	37		ug/L			3021538	3118216	0
[>	Sc	45		ug/L			603049	687876	1
[	V	51	19.876	ug/L	0.651	3	5204	291413	1
[	V-1	51	20.089	ug/L	0.787	3	161	288487	2
[	Cr	52	20.974	ug/L	0.449	2	15338	278674	2
[	Cr	53	21.673	ug/L	0.617	2	120	30554	1
[	Mn	55	656.654	ug/L	25.112	3	851	11273132	2
[	Co	59	5.662	ug/L	0.153	2	76	75539	1
[>	Ge	72		ug/L			436831	450104	1
[	Ni	60	14.265	ug/L	0.480	3	19	38913	1
[	Ni	62	15.016	ug/L	0.269	1	34	5791	1
[	Cu	63	14.943	ug/L	0.188	1	79	91590	0
[	Cu	65	15.306	ug/L	0.158	1	33	42387	1
[	Zn	66	146.624	ug/L	3.058	2	137	239161	0
[	Zn	67	156.398	ug/L	4.108	2	26	41579	1
[	Zn	68	151.393	ug/L	1.220	0	127	177686	1
[	As	75	8.811	ug/L	0.096	1	255	13655	0
[	As-1	75	8.702	ug/L	0.148	1	8509	21981	0
[	Se	82	~-0.001	ug/L	0.099	13003	6	6	257
[	Se	78	-0.164	ug/L	0.200	121	8644	8837	1
[	Mo	98	0.314	ug/L	0.008	2	14	1386	2
	Y	89		ug/L			278872	390901	2
	Kr	83		ug/L			509	662	7
[>	In	115		ug/L			878990	905498	1
[	Ag	107	0.080	ug/L	0.001	1	24	1039	1
[	Cd	111	2.372	ug/L	0.018	0	66	10525	1
[	Cd	114	2.329	ug/L	0.056	2	45	25575	1
[	Sb	121	~0.099	ug/L	0.003	2	270	1668	0
[	Sb	123	0.101	ug/L	0.006	6	194	1282	3
[	Ba	135	284.284	ug/L	5.828	2	45	1115978	0
[	Ba	137	281.896	ug/L	7.793	2	76	1910911	1
[>	Tb	159		ug/L			958896	1037122	1
[	Tl	205	~0.132	ug/L	0.001	0	228	4187	1
[	Pb	208	106.855	ug/L	1.005	0	272	4214768	1
[	Bi	209		ug/L			2065247	2089907	1
[	Th	232	5.293	ug/L	0.042	0	1210	200433	1
[	U	238	0.554	ug/L	0.007	1	68	21288	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:40:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, V, Cr, Co, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652803	2
[	Be	9	0.901	ug/L	0.011	1	9	1832	3
	C	13		ug/L			57054	105913	1
	Cl	37		ug/L			3021538	3247572	2
[>	Sc	45		ug/L			603049	740908	0
[	V	51	31.131	ug/L	0.647	2	5204	488193	2
[	V-1	51	31.733	ug/L	0.469	1	161	490961	1
[	Cr	52	79.497	ug/L	0.477	0	15338	1085099	0
[	Cr	53	81.582	ug/L	1.029	1	120	123501	0
[	Mn	55	2216.178	ug/L	9.067	0	851	40989699	0
[	Co	59	19.382	ug/L	0.478	2	76	278349	2
[>	Ge	72		ug/L			436831	451120	1
[	Ni	60	74.609	ug/L	0.359	0	19	203975	1
[	Ni	62	77.128	ug/L	2.645	3	34	29667	3
[	Cu	63	47.456	ug/L	1.049	2	79	291346	1
[	Cu	65	49.251	ug/L	1.214	2	33	136634	2
[	Zn	66	660.554	ug/L	14.508	2	137	1079448	1
[	Zn	67	669.234	ug/L	6.886	1	26	178287	2
[	Zn	68	671.832	ug/L	18.454	2	127	789831	2
[	As	75	17.911	ug/L	0.179	0	255	27549	0
[	As-1	75	17.776	ug/L	0.273	1	8509	35842	0
[	Se	82	0.114	ug/L	0.036	31	6	25	23
[	Se	78	0.017	ug/L	0.386	2326	8644	8932	0
[	Mo	98	0.654	ug/L	0.010	1	14	2877	1
	Y	89		ug/L			278872	484044	0
	Kr	83		ug/L			509	764	3
[>	In	115		ug/L			878990	944834	1
[	Ag	107	0.235	ug/L	0.007	3	24	3121	3
[	Cd	111	11.250	ug/L	0.062	0	66	51807	1
[	Cd	114	11.031	ug/L	0.241	2	45	126196	1
[	Sb	121	0.181	ug/L	0.001	0	270	2932	1
[	Sb	123	0.180	ug/L	0.006	3	194	2224	1
[	Ba	135	883.988	ug/L	10.305	1	45	3621238	1
[	Ba	137	878.169	ug/L	15.805	1	76	6211855	1
[>	Tb	159		ug/L			958896	1057086	0
[	Tl	205	0.633	ug/L	0.007	1	228	19538	0
[	Pb	208	503.600	ug/L	4.184	0	272	20246490	0
[	Bi	209		ug/L			2065247	2096336	0
[	Th	232	6.707	ug/L	0.049	0	1210	258508	0
[	U	238	0.869	ug/L	0.010	1	68	33976	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:45:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	659860	1
[	Be	9	0.490	ug/L	0.003	0	9	1010	1
	C	13		ug/L			57054	87747	1
	Cl	37		ug/L			3021538	3207753	0
[>	Sc	45		ug/L			603049	684691	0
[	V	51	18.100	ug/L	0.106	0	5204	264766	0
[	V-1	51	18.252	ug/L	0.104	0	161	261029	0
[	Cr	52	15.037	ug/L	0.209	1	15338	203790	0
[	Cr	53	15.528	ug/L	0.302	1	120	21833	1
[	Mn	55	837.663	ug/L	3.264	0	851	14317910	0
[	Co	59	5.213	ug/L	0.080	1	76	69244	0
[>	Ge	72		ug/L			436831	467080	2
[	Ni	60	12.334	ug/L	0.238	1	19	34922	1
[	Ni	62	13.842	ug/L	0.630	4	34	5539	2
[	Cu	63	14.220	ug/L	0.289	2	79	90429	0
[	Cu	65	14.764	ug/L	0.618	4	33	42404	1
[	Zn	66	240.953	ug/L	10.853	4	137	407559	2
[	Zn	67	244.879	ug/L	9.764	3	26	67516	1
[	Zn	68	244.144	ug/L	11.243	4	127	297073	2
[	As	75	8.166	ug/L	0.228	2	255	13149	1
[	As-1	75	7.988	ug/L	0.432	5	8509	21677	0
[	Se	82	-0.020	ug/L	0.021	107	6	3	116
[	Se	78	-0.520	ug/L	0.767	147	8644	9011	1
[	Mo	98	0.304	ug/L	0.008	2	14	1392	1
	Y	89		ug/L			278872	382556	2
	Kr	83		ug/L			509	638	3
[>	In	115		ug/L			878990	932293	1
[	Ag	107	0.114	ug/L	0.002	1	24	1503	0
[	Cd	111	3.707	ug/L	0.060	1	66	16890	0
[	Cd	114	3.640	ug/L	0.056	1	45	41119	0
[	Sb	121	0.131	ug/L	0.010	8	270	2169	5
[	Sb	123	0.127	ug/L	0.005	4	194	1606	2
[	Ba	135	303.026	ug/L	9.111	3	45	1224615	1
[	Ba	137	306.875	ug/L	7.056	2	76	2141768	0
[>	Tb	159		ug/L			958896	1035263	0
[	Tl	205	0.214	ug/L	0.002	0	228	6646	0
[	Pb	208	205.749	ug/L	1.900	0	272	8101184	0
[	Bi	209		ug/L			2065247	2134599	0
[	Th	232	4.645	ug/L	0.090	1	1210	175742	1
[	U	238	0.805	ug/L	0.009	1	68	30812	1

ICP-MS Quantitative Analysis - Summary Report

11.16.12 MJ

rr Be, Ag, V, Cr, ~~Mn~~ Co, Pb, Zn

Sample ID: VR33 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:50:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	646477	3
[	Be	9	0.932	ug/L	0.043	4	9	1873	2
	C	13		ug/L			57054	98603	4
	Cl	37		ug/L			3021538	3224780	0
[>	Sc	45		ug/L			603049	750911	2
[	V	51	33.294	ug/L	1.208	3	5204	528624	3
[	V-1	51	33.698	ug/L	0.653	1	161	528316	2
[	Cr	52	92.999	ug/L	2.685	2	15338	1282990	2
[	Cr	53	94.463	ug/L	1.595	1	120	144879	0
[	Mn	55	1524.642	ug/L	46.532	3	851	28571568	2
[	Co	59	19.177	ug/L	0.403	2	76	279089	1
[>	Ge	72		ug/L			436831	451107	1
[	Ni	60	92.638	ug/L	1.200	1	19	253228	0
[	Ni	62	93.787	ug/L	2.822	3	34	36063	1
[	Cu	63	42.354	ug/L	0.860	2	79	260014	1
[	Cu	65	43.499	ug/L	0.894	2	33	120654	0
[	Zn	66	440.674	ug/L	5.192	1	137	720209	0
[	Zn	67	447.020	ug/L	13.866	3	26	119054	1
[	Zn	68	457.059	ug/L	3.905	0	127	537365	0
[	As	75	16.823	ug/L	0.488	2	255	25886	1
[	As-1	75	16.711	ug/L	0.581	3	8509	34215	1
[	Se	82	< 0.128	ug/L	0.032	24	6	27	19
[	Se	78	0.127	ug/L	0.410	323	8644	8978	0
[	Mo	98	0.606	ug/L	0.015	2	14	2667	1
	Y	89		ug/L			278872	450914	1
	Kr	83		ug/L			509	769	3
[>	In	115		ug/L			878990	934601	0
[	Ag	107	0.224	ug/L	0.004	1	24	2949	1
[	Cd	111	6.628	ug/L	0.087	1	66	30219	0
[	Cd	114	6.528	ug/L	0.103	1	45	73900	1
[	Sb	121	< 0.057	ug/L	0.001	1	270	1111	1
[	Sb	123	0.058	ug/L	0.002	2	194	849	2
[	Ba	135	763.747	ug/L	10.518	1	45	3094871	1
[	Ba	137	751.426	ug/L	17.620	2	76	5258251	2
[>	Tb	159		ug/L			958896	1065150	1
[	Tl	205	0.514	ug/L	0.010	1	228	16019	1
[	Pb	208	336.315	ug/L	10.101	3	272	13619865	1
[	Bi	209		ug/L			2065247	2028719	3
[	Th	232	6.409	ug/L	0.199	3	1210	248873	1
[	U	238	0.858	ug/L	0.009	1	68	33796	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 19:54:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	631661	2
	Be	9	54.749	ug/L	2.119	3	9	107112	2
	C	13		ug/L			57054	57197	1
	Cl	37		ug/L			3021538	3177310	3
>	Sc	45		ug/L			603049	641952	0
	V	51	49.115	ug/L	0.418	0	5204	664117	0
	V-1	51	49.603	ug/L	0.591	1	161	664793	0
	Cr	52	48.946	ug/L	1.833	3	15338	585098	3
	Cr	53	50.541	ug/L	2.364	4	120	66332	4
	Mn	55	49.834	ug/L	1.601	3	851	799414	2
	Co	59	48.840	ug/L	1.797	3	76	607560	3
>	Ge	72		ug/L			436831	458837	1
	Ni	60	47.678	ug/L	0.554	1	19	132588	1
	Ni	62	47.840	ug/L	0.059	0	34	18733	1
	Cu	63	48.978	ug/L	0.830	1	79	305830	0
	Cu	65	49.095	ug/L	0.960	1	33	138509	0
	Zn	66	48.981	ug/L	1.178	2	137	81545	1
	Zn	67	50.733	ug/L	0.487	0	26	13771	0
	Zn	68	49.222	ug/L	0.824	1	127	58979	0
	As	75	48.704	ug/L	0.630	1	255	75731	0
	As-1	75	48.834	ug/L	0.658	1	8509	84533	0
	Se	82	49.158	ug/L	0.885	1	6	8299	1
	Se	78	49.596	ug/L	0.832	1	8644	30277	0
	Mo	98	43.133	ug/L	1.389	3	14	192141	3
	Y	89		ug/L			278872	300031	1
	Kr	83		ug/L			509	539	4
>	In	115		ug/L			878990	882555	1
	Ag	107	41.848	ug/L	0.960	2	24	515078	1
	Cd	111	49.818	ug/L	0.634	1	66	214067	1
	Cd	114	50.328	ug/L	0.456	0	45	537654	0
	Sb	121	50.318	ug/L	1.319	2	270	686362	1
	Sb	123	49.645	ug/L	0.225	0	194	519051	0
	Ba	135	49.602	ug/L	0.732	1	45	189830	0
	Ba	137	49.840	ug/L	0.986	1	76	329387	1
>	Tb	159		ug/L			958896	997391	1
	Tl	205	51.078	ug/L	0.841	1	228	1468619	0
	Pb	208	50.177	ug/L	0.907	1	272	1903417	0
	Bi	209		ug/L			2065247	2011965	3
	Th	232	51.028	ug/L	1.090	2	1210	1847186	0
	U	238	52.810	ug/L	1.067	2	68	1943189	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:01:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	610503 ✓	2
	Be	9	-0.002	ug/L	0.002	124	9	5	71
	C	13		ug/L			57054	57517	1
	Cl	37		ug/L			3021538	3066212	1
>	Sc	45		ug/L			603049	604213 ✓	0
	V	51	0.004	ug/L	0.015	425	5204	5259	3
	V-1	51	-0.004	ug/L	0.001	24	161	110	11
	Cr	52	0.013	ug/L	0.045	347	15338	15510	3
	Cr	53	-0.012	ug/L	0.008	67	120	106	9
	Mn	55	-0.025	ug/L	0.010	42	851	482	32
	Co	59	0.000	ug/L	0.002	606	76	80	31
>	Ge	72		ug/L			436831	432422 ✓	1
	Ni	60	0.004	ug/L	0.004	102	19	30	35
	Ni	62	0.012	ug/L	0.012	103	34	38	10
	Cu	63	0.001	ug/L	0.002	179	79	86	15
	Cu	65	0.001	ug/L	0.002	166	33	36	14
	Zn	66	0.011	ug/L	0.010	87	137	152	8
	Zn	67	-0.004	ug/L	0.006	147	26	25	4
	Zn	68	0.017	ug/L	0.009	52	127	144	5
	As	75	-0.002	ug/L	0.017	725	255	249	10
	As-1	75	0.171	ug/L	0.066	38	8509	8673	1
	Se	82	-0.069	ug/L	0.036	51	6	-4	116
	Se	78	0.619	ug/L	0.220	35	8644	8805	0
	Mo	98	0.007	ug/L	0.002	24	14	44	15
	Y	89		ug/L			278872	285995	2
	Kr	83		ug/L			509	536	2
>	In	115		ug/L			878990	868994 ✓	1
	Ag	107	0.001	ug/L	0.001	131	24	37	44
	Cd	111	0.002	ug/L	0.001	53	66	73	5
	Cd	114	0.001	ug/L	0.001	108	45	52	14
	Sb	121	0.039	ug/L	0.008	19	270	786	11
	Sb	123	0.042	ug/L	0.007	16	194	622	9
	Ba	135	0.005	ug/L	0.009	161	45	65	48
	Ba	137	0.006	ug/L	0.011	173	76	116	60
>	Tb	159		ug/L			958896	938191 ✓	0
	Tl	205	-0.002	ug/L	0.002	113	228	163	40
	Pb	208	0.002	ug/L	0.006	266	272	343	58
	Bi	209		ug/L			2065247	1974704	1
	Th	232	0.064	ug/L	0.001	1	1210	3355	0
	U	238	0.001	ug/L	0.002	222	68	97	68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:05:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	637006	1
[	Be	9	0.103	ug/L	0.004	4	9	213	2
	C	13		ug/L			57054	67624	0
	Cl	37		ug/L			3021538	3041267	1
[>	Sc	45		ug/L			603049	633984	1
[	V	51	3.994	ug/L	0.130	3	5204	58372	3
[	V-1	51	4.050	ug/L	0.130	3	161	53765	3
[	Cr	52	4.442	ug/L	0.137	3	15338	67103	2
[	Cr	53	4.623	ug/L	0.133	2	120	6109	3
[	Mn	55	216.997	ug/L	3.018	1	851	3435329	2
[	Co	59	1.501	ug/L	0.025	1	76	18519	2
[>	Ge	72		ug/L			436831	455111	1
[	Ni	60	4.489	ug/L	0.110	2	19	12398	2
[	Ni	62	4.759	ug/L	0.264	5	34	1879	4
[	Cu	63	5.949	ug/L	0.241	4	79	36912	3
[	Cu	65	6.187	ug/L	0.305	4	33	17343	4
[	Zn	66	85.240	ug/L	3.453	4	137	140645	3
[	Zn	67	82.675	ug/L	3.167	3	26	22238	3
[	Zn	68	84.634	ug/L	4.842	5	127	100463	4
[	As	75	2.947	ug/L	0.116	3	255	4794	3
[	As-1	75	2.875	ug/L	0.129	4	8509	13279	1
[	Se	82	n 0.033	ug/L	0.110	330	6	12	153
[	Se	78	-0.224	ug/L	0.098	43	8644	8911	1
[	Mo	98	0.056	ug/L	0.006	11	14	263	9
	Y	89		ug/L			278872	314558	1
	Kr	83		ug/L			509	536	4
[>	In	115		ug/L			878990	911173	0
[	Ag	107	0.041	ug/L	0.002	4	24	543	3
[	Cd	111	1.666	ug/L	0.067	4	66	7459	3
[	Cd	114	1.610	ug/L	0.055	3	45	17806	3
[	Sb	121	n 0.129	ug/L	0.009	7	270	2103	6
[	Sb	123	0.125	ug/L	0.005	4	194	1552	3
[	Ba	135	57.612	ug/L	1.614	2	45	227648	2
[	Ba	137	56.889	ug/L	1.259	2	76	388190	2
[>	Tb	159		ug/L			958896	1000226	1
[	Tl	205	n 0.081	ug/L	0.010	12	228	2581	12
[	Pb	208	92.949	ug/L	2.824	3	272	3536663	3
[	Bi	209		ug/L			2065247	2130065	0
[	Th	232	0.855	ug/L	0.008	0	1210	32286	0
[	U	238	0.156	ug/L	0.006	3	68	5843	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:09:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	659945	0
	Be	9	0.489	ug/L	0.009	1	9	1009	2
	C	13		ug/L			57054	92591	3
	Cl	37		ug/L			3021538	3219430	3
>	Sc	45		ug/L			603049	679492 ✓	0
	V	51	17.965	ug/L	0.267	1	5204	260831	1
	V-1	51	18.214	ug/L	0.185	1	161	258511	1
	Cr	52	19.921	ug/L	0.650	3	15338	262287	2
	Cr	53	20.741	ug/L	0.173	0	120	28896	0
	Mn	55	954.912	ug/L	16.335	1	851	16196755	1
	Co	59	6.576	ug/L	0.050	0	76	86670	1
>	Ge	72		ug/L			436831	459496 ✓	1
	Ni	60	21.314	ug/L	0.323	1	19	59360	0
	Ni	62	22.515	ug/L	0.147	0	34	8847	1
	Cu	63	28.166	ug/L	0.586	2	79	176141	0
	Cu	65	28.743	ug/L	0.470	1	33	81218	0
	Zn	66	392.717	ug/L	6.716	1	137	653717	0
	Zn	67	381.019	ug/L	3.165	0	26	103387	1
	Zn	68	393.427	ug/L	14.100	3	127	471074	2
	As	75	13.970	ug/L	0.295	2	255	21942	1
	As-1	75	13.866	ug/L	0.363	2	8509	30443	1
	Se	82	0.165	ug/L	0.029	17	6	34	13
	Se	78	-0.065	ug/L	0.282	432	8644	9063	0
	Mo	98	0.270	ug/L	0.018	6	14	1219	4
	Y	89		ug/L			278872	384939	0
	Kr	83		ug/L			509	638	1
>	In	115		ug/L			878990	941748 ✓	1
	Ag	107	0.191	ug/L	0.010	5	24	2530	4
	Cd	111	7.546	ug/L	0.010	0	66	34660	1
	Cd	114	7.411	ug/L	0.113	1	45	84523	0
	Sb	121	0.586	ug/L	0.004	0	270	8817	0
	Sb	123	0.584	ug/L	0.015	2	194	6723	1
	Ba	135	271.539	ug/L	4.571	1	45	1108683	0
	Ba	137	271.749	ug/L	4.483	1	76	1916054	0
>	Tb	159		ug/L			958896	1039259 ✓	1
	Tl	205	0.323	ug/L	0.007	2	228	9910	1
	Pb	208	431.383	ug/L	9.534	2	272	17048624	1
	Bi	209		ug/L			2065247	2127008	0
	Th	232	3.763	ug/L	0.061	1	1210	143162	0
	U	238	0.743	ug/L	0.015	1	68	28549	1

VR34 : 00338

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:13:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	647756	0
	Be	9	0.494	ug/L	0.006	1	9	1000	1
	C	13		ug/L			57054	94956	1
	Cl	37		ug/L			3021538	3156324	1
>	Sc	45		ug/L			603049	702300	1
	V	51	16.547	ug/L	0.405	2	5204	248773	1
	V-1	51	16.594	ug/L	0.413	2	161	243410	1
	Cr	52	16.563	ug/L	0.141	0	15338	228432	0
	Cr	53	16.716	ug/L	0.170	1	120	24097	0
	Mn	55	966.645	ug/L	6.870	0	851	16947412	1
	Co	59	6.195	ug/L	0.049	0	76	84391	0
>	Ge	72		ug/L			436831	462065	1
	Ni	60	16.938	ug/L	0.092	0	19	47444	1
	Ni	62	18.102	ug/L	0.158	0	34	7160	1
	Cu	63	27.983	ug/L	0.352	1	79	175994	0
	Cu	65	28.132	ug/L	0.710	2	33	79929	0
	Zn	66	391.139	ug/L	9.801	2	137	654692	1
	Zn	67	374.346	ug/L	12.339	3	26	102115	1
	Zn	68	392.371	ug/L	9.891	2	127	472452	1
	As	75	14.229	ug/L	0.202	1	255	22471	0
	As-1	75	14.040	ug/L	0.279	1	8509	30885	0
	Se	82	0.178	ug/L	0.069	38	6	36	32
	Se	78	-0.379	ug/L	0.356	93	8644	8978	0
	Mo	98	0.273	ug/L	0.018	6	14	1239	4
	Y	89		ug/L			278872	390890	2
	Kr	83		ug/L			509	631	5
>	In	115		ug/L			878990	943986	0
	Ag	107	0.183	ug/L	0.004	2	24	2436	1
	Cd	111	7.450	ug/L	0.092	1	66	34302	0
	Cd	114	7.390	ug/L	0.072	0	45	84487	0
	Sb	121	0.624	ug/L	0.021	3	270	9386	2
	Sb	123	0.608	ug/L	0.013	2	194	7009	1
	Ba	135	273.578	ug/L	2.113	0	45	1119803	1
	Ba	137	266.340	ug/L	3.056	1	76	1882638	1
>	Tb	159		ug/L			958896	1046147	1
	Tl	205	0.325	ug/L	0.004	1	228	10053	0
	Pb	208	429.843	ug/L	7.411	1	272	17100813	0
	Bi	209		ug/L			2065247	2144519	0
	Th	232	3.857	ug/L	0.057	1	1210	147699	0
	U	238	0.780	ug/L	0.008	1	68	30195	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 ASPK SWN
Sample Dil Factor: 20
Comments:

rr Ag. Pb. Zn

Sample Date/Time: Thursday, November 15, 2012 20:17:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637208	1
	Be	9	30.065	ug/L	0.914	3	9	59358	2
	C	13		ug/L			57054	94138	2
	Cl	37		ug/L			3021538	3154077	1
>	Sc	45		ug/L			603049	693199	1
	V	51	44.099	ug/L	2.367	5	5204	644129	3
	V-1	51	44.542	ug/L	2.160	4	161	644324	3
	Cr	52	42.583	ug/L	1.669	3	15338	551738	1
	Cr	53	44.027	ug/L	0.864	1	120	62408	0
	Mn	55	1066.179	ug/L	60.030	5	851	18436850	3
	Co	59	31.849	ug/L	0.861	2	76	427814	2
>	Ge	72		ug/L			436831	460729	0
	Ni	60	44.076	ug/L	1.413	3	19	123086	3
	Ni	62	44.442	ug/L	1.632	3	34	17477	3
	Cu	63	55.959	ug/L	1.524	2	79	350905	2
	Cu	65	56.757	ug/L	0.646	1	33	160805	1
	Zn	66	511.574	ug/L	12.178	2	137	854011	2
	Zn	67	494.188	ug/L	11.977	2	26	134458	2
	Zn	68	516.221	ug/L	4.390	0	127	619904	1
	As	75	41.220	ug/L	0.426	1	255	64406	1
	As-1	75	41.234	ug/L	0.381	0	8509	73074	1
	Se	82	81.084	ug/L	1.407	1	6	13743	1
	Se	78	81.370	ug/L	1.275	1	8644	44042	1
	Mo	98	20.489	ug/L	0.304	1	14	91652	1
	Y	89		ug/L			278872	399282	2
	Kr	83		ug/L			509	630	2
>	In	115		ug/L			878990	936454	0
	Ag	107	19.346	ug/L	0.408	2	24	252691	2
	Cd	111	33.322	ug/L	1.149	3	66	151924	2
	Cd	114	33.449	ug/L	0.712	2	45	379164	1
	Sb	121	2.201	ug/L	0.057	2	270	32134	1
	Sb	123	2.193	ug/L	0.090	4	194	24517	3
	Ba	135	324.273	ug/L	11.311	3	45	1316420	2
	Ba	137	326.513	ug/L	8.780	2	76	2289121	1
>	Tb	159		ug/L			958896	1051472	1
	Tl	205	26.098	ug/L	0.365	1	228	791356	2
	Pb	208	492.421	ug/L	3.320	0	272	19692339	1
	Bi	209		ug/L			2065247	2141259	0
	Th	232	29.408	ug/L	0.493	1	1210	1123126	2
	U	238	27.442	ug/L	0.465	1	68	1064812	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:21:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652368	1
[	Be	9	28.217	ug/L	0.910	3	9	57031	1
	C	13		ug/L			57054	94149	2
	Cl	37		ug/L			3021538	3175625	0
[>	Sc	45		ug/L			603049	680693	1
[	V	51	42.032	ug/L	0.668	1	5204	603481	1
[	V-1	51	42.307	ug/L	0.607	1	161	601264	1
[	Cr	52	43.930	ug/L	0.917	2	15338	558555	1
[	Cr	53	44.834	ug/L	0.836	1	120	62407	0
[	Mn	55	961.014	ug/L	29.887	3	851	16325654	1
[	Co	59	31.451	ug/L	0.767	2	76	414844	1
[>	Ge	72		ug/L			436831	458582	1
[	Ni	60	46.329	ug/L	0.394	0	19	128767	1
[	Ni	62	46.734	ug/L	0.680	1	34	18290	1
[	Cu	63	51.954	ug/L	0.836	1	79	324243	1
[	Cu	65	53.239	ug/L	0.763	1	33	150124	0
[	Zn	66	461.363	ug/L	15.090	3	137	766424	2
[	Zn	67	452.954	ug/L	13.238	2	26	122644	2
[	Zn	68	461.614	ug/L	6.792	1	127	551709	0
[	As	75	38.804	ug/L	0.552	1	255	60358	0
[	As-1	75	38.891	ug/L	0.580	1	8509	69103	0
[	Se	82	81.139	ug/L	0.713	0	6	13687	0
[	Se	78	81.718	ug/L	0.874	1	8644	43982	0
[	Mo	98	22.730	ug/L	0.401	1	14	101200	2
	Y	89		ug/L			278872	383235	1
	Kr	83		ug/L			509	637	1
[>	In	115		ug/L			878990	924866	0
[	Ag	107	20.490	ug/L	0.191	0	24	264342	1
[	Cd	111	32.633	ug/L	0.556	1	66	146976	1
[	Cd	114	32.396	ug/L	0.061	0	45	362727	0
[	Sb	121	24.626	ug/L	0.248	1	270	352230	0
[	Sb	123	24.417	ug/L	0.109	0	194	267634	0
[	Ba	135	295.113	ug/L	2.705	0	45	1183451	0
[	Ba	137	295.693	ug/L	5.803	1	76	2047814	2
[>	Tb	159		ug/L			958896	1031394	1
[	Tl	205	26.823	ug/L	0.158	0	228	797691	0
[	Pb	208	454.014	ug/L	4.312	0	272	17808623	0
[	Bi	209		ug/L			2065247	2096606	0
[	Th	232	29.981	ug/L	0.238	0	1210	1122951	0
[	U	238	27.336	ug/L	0.365	1	68	1040265	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:25:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	647867	0
	Be	9	0.573	ug/L	0.019	3	9	1160	2
	C	13		ug/L			57054	89594	4
	Cl	37		ug/L			3021538	3144138	1
>	Sc	45		ug/L			603049	709474	0
	V	51	30.158	ug/L	0.443	1	5204	453046	1
	V-1	51	30.424	ug/L	0.844	2	161	450714	2
	Cr	52	28.912	ug/L	0.514	1	15338	389388	1
	Cr	53	29.779	ug/L	0.993	3	120	43255	2
	Mn	55	799.043	ug/L	11.654	1	851	14152637	1
	Co	59	10.147	ug/L	0.208	2	76	139593	2
>	Ge	72		ug/L			436831	460869	1
	Ni	60	22.338	ug/L	0.639	2	19	62386	1
	Ni	62	23.730	ug/L	0.245	1	34	9352	2
	Cu	63	26.646	ug/L	0.347	1	79	167156	0
	Cu	65	26.651	ug/L	0.383	1	33	75548	2
	Zn	66	302.249	ug/L	3.940	1	137	504728	1
	Zn	67	295.916	ug/L	5.477	1	26	80554	2
	Zn	68	295.813	ug/L	4.707	1	127	355448	3
	As	75	15.038	ug/L	0.191	1	255	23672	0
	As-1	75	14.921	ug/L	0.287	1	8509	32174	0
	Se	82	0.032	ug/L	0.093	287	6	12	129
	Se	78	-0.120	ug/L	0.366	306	8644	9067	0
	Mo	98	0.484	ug/L	0.008	1	14	2178	0
	Y	89		ug/L			278872	445142	1
	Kr	83		ug/L			509	712	4
>	In	115		ug/L			878990	938356	0
	Ag	107	0.201	ug/L	0.004	2	24	2659	2
	Cd	111	5.733	ug/L	0.099	1	66	26254	2
	Cd	114	5.640	ug/L	0.041	0	45	64114	1
	Sb	121	0.225	ug/L	0.013	5	270	3547	5
	Sb	123	0.226	ug/L	0.009	4	194	2716	4
	Ba	135	270.539	ug/L	3.927	1	45	1100814	1
	Ba	137	268.838	ug/L	2.845	1	76	1888946	1
>	Tb	159		ug/L			958896	1044925	1
	Tl	205	0.320	ug/L	0.006	1	228	9887	0
	Pb	208	224.746	ug/L	5.886	2	272	8930210	1
	Bi	209		ug/L			2065247	2100934	0
	Th	232	6.218	ug/L	0.055	0	1210	236986	0
	U	238	0.780	ug/L	0.014	1	68	30124	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:30:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	645757	3
	Be	9	0.586	ug/L	0.045	7	9	1180	5
	C	13		ug/L			57054	89675	1
	Cl	37		ug/L			3021538	3128208	2
>	Sc	45		ug/L			603049	705676	1
	V	51	30.337	ug/L	0.561	1	5204	453297	2
	V-1	51	30.387	ug/L	0.610	2	161	447814	2
	Cr	52	28.962	ug/L	0.269	0	15338	387926	1
	Cr	53	29.123	ug/L	0.385	1	120	42082	1
	Mn	55	949.990	ug/L	12.780	1	851	16736855	2
	Co	59	10.944	ug/L	0.216	1	76	149735	2
>	Ge	72		ug/L			436831	460191	0
	Ni	60	24.402	ug/L	0.454	1	19	68074	2
	Ni	62	25.885	ug/L	0.545	2	34	10181	1
	Cu	63	29.343	ug/L	0.181	0	79	183813	0
	Cu	65	30.282	ug/L	0.434	1	33	85705	0
	Zn	66	316.674	ug/L	2.459	0	137	528043	0
	Zn	67	311.896	ug/L	3.204	1	26	84774	1
	Zn	68	316.956	ug/L	8.706	2	127	380181	2
	As	75	18.609	ug/L	0.437	2	255	29188	2
	As-1	75	18.436	ug/L	0.484	2	8509	37589	1
	Se	82	0.048	ug/L	0.068	142	6	14	78
	Se	78	-0.324	ug/L	0.181	55	8644	8967	0
	Mo	98	0.417	ug/L	0.014	3	14	1879	3
	Y	89		ug/L			278872	417239	0
	Kr	83		ug/L			509	705	6
>	In	115		ug/L			878990	914265	0
	Ag	107	0.218	ug/L	0.015	6	24	2802	6
	Cd	111	6.699	ug/L	0.059	0	66	29880	0
	Cd	114	6.669	ug/L	0.042	0	45	73850	0
	Sb	121	0.189	ug/L	0.009	4	270	2947	3
	Sb	123	0.195	ug/L	0.003	1	194	2313	1
	Ba	135	302.551	ug/L	4.053	1	45	1199383	1
	Ba	137	309.914	ug/L	6.134	1	76	2121590	1
>	Tb	159		ug/L			958896	1034792	0
	Tl	205	0.314	ug/L	0.004	1	228	9627	1
	Pb	208	274.312	ug/L	3.043	1	272	10796136	1
	Bi	209		ug/L			2065247	2088671	0
	Th	232	6.666	ug/L	0.106	1	1210	251537	1
	U	238	0.651	ug/L	0.012	1	68	24940	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:34:07

rr Ag

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	641470	0
[	Be	9	0.584	ug/L	0.015	2	9	1171	2
	C	13		ug/L			57054	81168	3
	Cl	37		ug/L			3021538	3155521	3
[>	Sc	45		ug/L			603049	717259	1
[	V	51	28.554	ug/L	0.586	2	5204	433933	1
[	V-1	51	28.757	ug/L	0.537	1	161	430665	0
[	Cr	52	28.096	ug/L	0.556	1	15338	383055	2
[	Cr	53	28.760	ug/L	0.661	2	120	42240	2
[	Mn	55	831.906	ug/L	28.334	3	851	14893848	2
[	Co	59	10.830	ug/L	0.111	1	76	150615	1
[>	Ge	72		ug/L			436831	462748	0
[	Ni	60	24.140	ug/L	0.914	3	19	67700	3
[	Ni	62	25.510	ug/L	0.408	1	34	10090	1
[	Cu	63	26.393	ug/L	0.798	3	79	166236	2
[	Cu	65	27.374	ug/L	0.378	1	33	77909	1
[	Zn	66	149.744	ug/L	1.579	1	137	251177	1
[	Zn	67	165.156	ug/L	1.375	0	26	45148	0
[	Zn	68	158.195	ug/L	1.813	1	127	190876	0
[	As	75	11.548	ug/L	0.043	0	255	18316	0
[	As-1	75	11.358	ug/L	0.107	0	8509	26747	0
[	Se	82	∿0.037	ug/L	0.016	42	6	12	19
[	Se	78	-0.406	ug/L	0.191	46	8644	8981	0
[	Mo	98	0.414	ug/L	0.028	6	14	1871	5
	Y	89		ug/L			278872	420681	0
	Kr	83		ug/L			509	692	5
[>	In	115		ug/L			878990	889172	0
[	Ag	107	0.135	ug/L	0.003	2	24	1704	1
[	Cd	111	2.255	ug/L	0.042	1	66	9826	1
[	Cd	114	2.174	ug/L	0.052	2	45	23436	1
[	Sb	121	∿0.103	ug/L	0.004	3	270	1683	2
[	Sb	123	0.099	ug/L	0.006	6	194	1233	4
[	Ba	135	295.592	ug/L	3.234	1	45	1139603	0
[	Ba	137	292.992	ug/L	5.571	1	76	1950556	1
[>	Tb	159		ug/L			958896	1044705	0
[	Tl	205	∿0.162	ug/L	0.004	2	228	5117	1
[	Pb	208	105.877	ug/L	1.315	1	272	4206855	0
[	Bi	209		ug/L			2065247	2099346	1
[	Th	232	6.748	ug/L	0.120	1	1210	257037	1
[	U	238	0.657	ug/L	0.009	1	68	25400	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:39:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	655119	1
	Be	9	0.667	ug/L	0.029	4	9	1364	4
	C	13		ug/L			57054	69401	1
	Cl	37		ug/L			3021538	3161794	0
>	Sc	45		ug/L			603049	715986	0
	V	51	32.530	ug/L	0.515	1	5204	492654	1
	V-1	51	32.755	ug/L	0.540	1	161	489667	1
	Cr	52	27.136	ug/L	0.219	0	15338	369939	1
	Cr	53	27.859	ug/L	0.374	1	120	40847	0
	Mn	55	493.150	ug/L	9.607	1	851	8814359	1
	Co	59	9.292	ug/L	0.119	1	76	128995	0
>	Ge	72		ug/L			436831	460272	1
	Ni	60	22.408	ug/L	0.475	2	19	62505	0
	Ni	62	23.851	ug/L	0.681	2	34	9383	1
	Cu	63	23.178	ug/L	0.389	1	79	145232	1
	Cu	65	23.895	ug/L	0.505	2	33	67643	1
	Zn	66	57.283	ug/L	1.268	2	137	95632	0
	Zn	67	69.233	ug/L	1.143	1	26	18838	0
	Zn	68	62.809	ug/L	2.506	3	127	75434	2
	As	75	5.649	ug/L	0.209	3	255	9046	2
	As-1	75	5.496	ug/L	0.325	5	8509	17497	1
	Se	82	-0.153	ug/L	0.036	23	6	-19	30
	Se	78	-0.238	ug/L	0.462	194	8644	9004	1
	Mo	98	0.288	ug/L	0.005	1	14	1299	3
	Y	89		ug/L			278872	480852	1
	Kr	83		ug/L			509	799	3
>	In	115		ug/L			878990	887117	1
	Ag	107	0.100	ug/L	0.001	0	24	1257	1
	Cd	111	0.291	ug/L	0.046	15	66	1322	14
	Cd	114	0.159	ug/L	0.005	3	45	1753	2
	Sb	121	0.002	ug/L	0.002	100	270	297	6
	Sb	123	0.003	ug/L	0.001	31	194	225	2
	Ba	135	192.802	ug/L	5.349	2	45	741436	1
	Ba	137	192.166	ug/L	7.093	3	76	1275987	2
>	Tb	159		ug/L			958896	1043661	0
	Tl	205	0.128	ug/L	0.003	2	228	4087	1
	Pb	208	14.137	ug/L	0.167	1	272	561437	0
	Bi	209		ug/L			2065247	2014568	2
	Th	232	7.175	ug/L	0.181	2	1210	272945	2
	U	238	1.076	ug/L	0.021	1	68	41513	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:43:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	641845	1
[	Be	9	0.485	ug/L	0.011	2	9	974	3
	C	13		ug/L			57054	64560	2
	Cl	37		ug/L			3021538	3105443	2
[>	Sc	45		ug/L			603049	696882	0
[	V	51	28.398	ug/L	0.101	0	5204	419387	0
[	V-1	51	28.726	ug/L	0.176	0	161	418040	0
[	Cr	52	24.907	ug/L	0.437	1	15338	331936	1
[	Cr	53	25.973	ug/L	0.473	1	120	37077	1
[	Mn	55	335.658	ug/L	10.110	3	851	5839959	2
[	Co	59	7.833	ug/L	0.154	1	76	105866	2
[>	Ge	72		ug/L			436831	464768	0
[	Ni	60	17.538	ug/L	0.402	2	19	49409	1
[	Ni	62	19.301	ug/L	0.409	2	34	7676	1
[	Cu	63	15.609	ug/L	0.463	2	79	98774	1
[	Cu	65	16.169	ug/L	0.389	2	33	46229	1
[	Zn	66	38.894	ug/L	0.536	1	137	65625	0
[	Zn	67	47.895	ug/L	1.731	3	26	13168	2
[	Zn	68	42.326	ug/L	0.738	1	127	51390	0
[	As	75	4.564	ug/L	0.064	1	255	7435	2
[	As-1	75	4.412	ug/L	0.083	1	8509	15971	1
[	Se	82	∿0.022	ug/L	0.066	304	6	2	383
[	Se	78	-0.384	ug/L	0.271	70	8644	9030	0
[	Mo	98	0.375	ug/L	0.029	7	14	1705	6
	Y	89		ug/L			278872	424740	0
	Kr	83		ug/L			509	652	4
[>	In	115		ug/L			878990	889539	0
[	Ag	107	0.066	ug/L	0.001	2	24	840	1
[	Cd	111	0.197	ug/L	0.005	2	66	919	2
[	Cd	114	0.109	ug/L	0.002	1	45	1218	1
[	Sb	121	∿ 0.001	ug/L	0.005	322	270	293	21
[	Sb	123	0.001	ug/L	0.002	144	194	209	8
[	Ba	135	138.361	ug/L	1.682	1	45	533671	0
[	Ba	137	136.746	ug/L	1.518	1	76	910838	0
[>	Tb	159		ug/L			958896	1027409	0
[	Tl	205	∿ 0.105	ug/L	0.002	1	228	3358	1
[	Pb	208	9.514	ug/L	0.076	0	272	372025	0
[	Bi	209		ug/L			2065247	2022553	3
[	Th	232	6.019	ug/L	0.066	1	1210	225617	1
[	U	238	0.862	ug/L	0.012	1	68	32743	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:47:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	620983	1
[	Be	9	54.707	ug/L	1.777	3	9	105232	1
	C	13		ug/L			57054	57598	3
	Cl	37		ug/L			3021538	3172655	0
[>	Sc	45		ug/L			603049	634388	0
[	V	51	50.821	ug/L	0.618	1	5204	678864	0
[	V-1	51	50.943	ug/L	1.005	1	161	674646	1
[	Cr	52	50.408	ug/L	0.287	0	15338	595025	0
[	Cr	53	50.806	ug/L	1.745	3	120	65888	2
[	Mn	55	50.010	ug/L	0.429	0	851	792818	0
[	Co	59	50.361	ug/L	0.679	1	76	619126	0
[>	Ge	72		ug/L			436831	453738	1
[	Ni	60	48.589	ug/L	1.653	3	19	133576	2
[	Ni	62	49.563	ug/L	1.216	2	34	19186	1
[	Cu	63	49.838	ug/L	1.264	2	79	307717	1
[	Cu	65	50.895	ug/L	1.253	2	33	141991	1
[	Zn	66	49.803	ug/L	1.089	2	137	81990	1
[	Zn	67	51.765	ug/L	0.731	1	26	13893	0
[	Zn	68	50.811	ug/L	0.167	0	127	60208	1
[	As	75	49.208	ug/L	0.899	1	255	75654	0
[	As-1	75	49.483	ug/L	1.023	2	8509	84580	0
[	Se	82	49.776	ug/L	0.606	1	6	8310	1
[	Se	78	50.742	ug/L	0.836	1	8644	30424	0
[	Mo	98	44.434	ug/L	0.342	0	14	195709	0
	Y	89		ug/L			278872	303370	1
	Kr	83		ug/L			509	534	5
[>	In	115		ug/L			878990	878947	1
[	Ag	107	40.536	ug/L	0.368	0	24	496963	1
[	Cd	111	50.048	ug/L	1.176	2	66	214155	1
[	Cd	114	50.430	ug/L	0.414	0	45	536555	0
[	Sb	121	49.652	ug/L	0.916	1	270	674569	0
[	Sb	123	49.296	ug/L	0.743	1	194	513266	0
[	Ba	135	50.738	ug/L	1.263	2	45	193389	2
[	Ba	137	49.423	ug/L	0.566	1	76	325303	0
[>	Tb	159		ug/L			958896	982544	0
[	Tl	205	51.258	ug/L	0.997	1	228	1451905	1
[	Pb	208	50.146	ug/L	0.676	1	272	1874059	0
[	Bi	209		ug/L			2065247	1974420	0
[	Th	232	51.301	ug/L	0.321	0	1210	1829693	0
[	U	238	52.722	ug/L	0.656	1	68	1911267	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:54:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	613614	0
	Be	9	-0.001	ug/L	0.002	374	9	8	45
	C	13		ug/L			57054	57457	2
	Cl	37		ug/L			3021538	3041146	1
>	Sc	45		ug/L			603049	609379	2
	V	51	0.003	ug/L	0.008	262	5204	5294	0
	V-1	51	-0.006	ug/L	0.002	32	161	93	27
	Cr	52	0.001	ug/L	0.022	2263	15338	15506	0
	Cr	53	-0.027	ug/L	0.010	37	120	88	16
	Mn	55	-0.030	ug/L	0.008	25	851	401	31
	Co	59	0.000	ug/L	0.002	639	76	81	32
>	Ge	72		ug/L			436831	451545	0
	Ni	60	0.001	ug/L	0.003	461	19	22	41
	Ni	62	0.017	ug/L	0.018	103	34	42	16
	Cu	63	0.000	ug/L	0.000	19	79	85	1
	Cu	65	0.003	ug/L	0.004	137	33	42	26
	Zn	66	0.001	ug/L	0.008	908	137	143	8
	Zn	67	-0.002	ug/L	0.009	417	26	27	9
	Zn	68	0.001	ug/L	0.003	548	127	132	2
	As	75	-0.023	ug/L	0.011	47	255	229	6
	As-1	75	-0.041	ug/L	0.087	211	8509	8732	0
	Se	82	-0.023	ug/L	0.116	497	6	2	749
	Se	78	-0.127	ug/L	0.303	237	8644	8881	0
	Mo	98	0.008	ug/L	0.002	22	14	47	14
	Y	89		ug/L			278872	285095	0
	Kr	83		ug/L			509	505	7
>	In	115		ug/L			878990	858842	1
	Ag	107	0.001	ug/L	0.001	75	24	37	27
	Cd	111	0.002	ug/L	0.002	76	66	74	8
	Cd	114	0.001	ug/L	0.002	258	45	50	31
	Sb	121	0.039	ug/L	0.003	8	270	787	4
	Sb	123	0.041	ug/L	0.007	17	194	609	10
	Ba	135	0.001	ug/L	0.005	540	45	48	38
	Ba	137	0.003	ug/L	0.004	115	76	94	23
>	Tb	159		ug/L			958896	921694	1
	Tl	205	-0.003	ug/L	0.002	89	228	151	39
	Pb	208	0.000	ug/L	0.002	1984	272	265	24
	Bi	209		ug/L			2065247	1982154	0
	Th	232	0.049	ug/L	0.002	4	1210	2807	2
	U	238	0.000	ug/L	0.001	664	68	72	60

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1 SWN
Sample Dil Factor: 20
rr Ag, Be
Comments:
Sample Date/Time: Thursday, November 15, 2012 20:58:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	616492	1
	Be	9	-0.002	ug/L	0.000	16	9	5	10
	C	13		ug/L			57054	60198	0
	Cl	37		ug/L			3021538	3023210	0
>	Sc	45		ug/L			603049	631911	0
	V	51	-0.002	ug/L	0.003	157	5204	5426	0
	V-1	51	-0.008	ug/L	0.000	1	161	68	3
	Cr	52	0.001	ug/L	0.010	1086	15338	16082	0
	Cr	53	-0.017	ug/L	0.005	30	120	104	6
	Mn	55	-0.018	ug/L	0.002	9	851	609	3
	Co	59	0.000	ug/L	0.001	133	76	85	8
>	Ge	72		ug/L			436831	447560	0
	Ni	60	0.001	ug/L	0.001	90	19	24	14
	Ni	62	-0.004	ug/L	0.013	329	34	33	14
	Cu	63	0.416	ug/L	0.012	2	79	2615	2
	Cu	65	0.420	ug/L	0.015	3	33	1189	3
	Zn	66	0.311	ug/L	0.018	5	137	645	3
	Zn	67	0.238	ug/L	0.056	23	26	90	17
	Zn	68	0.275	ug/L	0.024	8	127	451	6
	As	75	-0.001	ug/L	0.017	2837	255	261	9
	As-1	75	0.172	ug/L	0.118	68	8509	8977	1
	Se	82	-0.054	ug/L	0.077	144	6	-2	512
	Se	78	0.582	ug/L	0.454	78	8644	9098	1
	Mo	98	0.002	ug/L	0.001	54	14	23	21
	Y	89		ug/L			278872	299562	1
	Kr	83		ug/L			509	528	2
>	In	115		ug/L			878990	872908	1
	Ag	107	0.000	ug/L	0.001	534	24	25	31
	Cd	111	0.003	ug/L	0.002	89	66	77	12
	Cd	114	-0.001	ug/L	0.001	42	45	31	18
	Sb	121	-0.000	ug/L	0.002	532	270	263	12
	Sb	123	0.001	ug/L	0.004	453	194	203	23
	Ba	135	-0.004	ug/L	0.002	40	45	30	19
	Ba	137	-0.004	ug/L	0.000	12	76	52	6
>	Tb	159		ug/L			958896	947500	0
	Tl	205	-0.004	ug/L	0.001	24	228	121	20
	Pb	208	0.019	ug/L	0.001	6	272	938	4
	Bi	209		ug/L			2065247	2052218	3
	Th	232	0.018	ug/L	0.007	41	1210	1799	14
	U	238	-0.001	ug/L	0.000	10	68	26	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:02:43
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	622010	0
[	Be	9	27.804	ug/L	0.297	1	9	53596	0
	C	13		ug/L			57054	59976	1
	Cl	37		ug/L			3021538	3017324	3
[>	Sc	45		ug/L			603049	619764	2
[	V	51	25.713	ug/L	0.162	0	5204	338187	2
[	V-1	51	25.949	ug/L	0.300	1	161	335818	2
[	Cr	52	26.162	ug/L	0.486	1	15338	309203	1
[	Cr	53	26.936	ug/L	0.653	2	120	34182	2
[	Mn	55	26.356	ug/L	0.964	3	851	408366	0
[	Co	59	26.365	ug/L	0.462	1	76	316625	1
[>	Ge	72		ug/L			436831	449238	1
[	Ni	60	25.613	ug/L	0.237	0	19	69744	1
[	Ni	62	25.884	ug/L	0.282	1	34	9938	0
[	Cu	63	25.919	ug/L	0.411	1	79	158486	0
[	Cu	65	26.597	ug/L	0.931	3	33	73463	1
[	Zn	66	83.190	ug/L	2.214	2	137	135482	1
[	Zn	67	79.647	ug/L	1.196	1	26	21151	1
[	Zn	68	83.017	ug/L	0.672	0	127	97303	1
[	As	75	25.308	ug/L	0.698	2	255	38645	1
[	As-1	75	25.337	ug/L	0.713	2	8509	47144	1
[	Se	82	82.151	ug/L	1.875	2	6	13573	1
[	Se	78	82.368	ug/L	1.973	2	8644	43354	1
[	Mo	98	22.363	ug/L	0.421	1	14	97536	2
	Y	89		ug/L			278872	293339	2
	Kr	83		ug/L			509	519	2
[>	In	115		ug/L			878990	868956	2
[	Ag	107	21.769	ug/L	0.308	1	24	263822	1
[	Cd	111	25.519	ug/L	0.346	1	66	107993	2
[	Cd	114	25.869	ug/L	0.540	2	45	272077	1
[	Sb	121	25.244	ug/L	0.752	2	270	339118	1
[	Sb	123	24.955	ug/L	0.521	2	194	256925	0
[	Ba	135	25.833	ug/L	0.678	2	45	97338	0
[	Ba	137	25.772	ug/L	0.515	2	76	167710	0
[>	Tb	159		ug/L			958896	940958	3
[	Tl	205	27.666	ug/L	1.106	3	228	750016	0
[	Pb	208	27.183	ug/L	0.995	3	272	972344	0
[	Bi	209		ug/L			2065247	2004125	3
[	Th	232	27.080	ug/L	0.792	2	1210	924948	0
[	U	238	27.608	ug/L	0.707	2	68	958067	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:06:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Be, Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			617808	637083	1
	Be	**9**	**0.563**	ug/L	0.039	6	9	1119	5
	C	**13**		ug/L			57054	84178	2
	Cl	**37**		ug/L			3021538	3135591	0
>	**Sc**	**45**		ug/L			603049	699787	2
	V	**51**	**34.598**	ug/L	0.463	1	5204	511680	1
	V-1	**51**	**34.638**	ug/L	0.423	1	161	506061	1
	Cr	**52**	**23.067**	ug/L	0.906	3	15338	309860	1
	Cr	**53**	**23.170**	ug/L	0.609	2	120	33217	0
	Mn	**55**	**524.904**	ug/L	19.624	3	851	9165306	1
	Co	**59**	**7.995**	ug/L	0.299	3	76	108445	1
>	**Ge**	**72**		ug/L			436831	460380	1
	Ni	**60**	**16.041**	ug/L	0.026	0	19	44771	1
	Ni	**62**	**18.411**	ug/L	0.644	3	34	7253	2
	Cu	**63**	**23.280**	ug/L	0.225	0	79	145906	1
	Cu	**65**	**23.347**	ug/L	0.367	1	33	66124	2
	Zn	**66**	**195.850**	ug/L	3.355	1	137	326726	0
	Zn	**67**	**194.480**	ug/L	3.119	1	26	52887	1
	Zn	**68**	**198.573**	ug/L	7.276	3	127	238279	2
	As	**75**	**9.539**	ug/L	0.118	1	255	15098	0
	As-1	**75**	**9.477**	ug/L	0.144	1	8509	23687	0
	Se	**82**	**0.048**	ug/L	0.003	6	6	14	4
	Se	**78**	**0.023**	ug/L	0.151	661	8644	9119	1
	Mo	**98**	**0.317**	ug/L	0.005	1	14	1433	2
	Y	**89**		ug/L			278872	434559	0
	Kr	**83**		ug/L			509	661	2
>	**In**	**115**		ug/L			878990	903557	1
	Ag	**107**	**0.159**	ug/L	0.005	3	24	2028	4
	Cd	**111**	**3.552**	ug/L	0.029	0	66	15688	1
	Cd	**114**	**3.506**	ug/L	0.079	2	45	38391	1
	Sb	**121**	**0.142**	ug/L	0.007	4	270	2267	5
	Sb	**123**	**0.142**	ug/L	0.005	3	194	1721	3
	Ba	**135**	**165.327**	ug/L	0.508	0	45	647741	0
	Ba	**137**	**163.352**	ug/L	2.362	1	76	1105122	0
>	**Tb**	**159**		ug/L			958896	1029231	0
	Tl	**205**	**0.239**	ug/L	0.006	2	228	7342	2
	Pb	**208**	**142.276**	ug/L	1.014	0	272	5569591	0
	Bi	**209**		ug/L			2065247	2017134	3
	Th	**232**	**6.646**	ug/L	0.096	1	1210	249425	1
	U	**238**	**0.788**	ug/L	0.003	0	68	29982	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:10:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Zn, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	644623	3
[	Be	9	0.535	ug/L	0.026	4	9	1078	5
	C	13		ug/L			57054	82905	1
	Cl	37		ug/L			3021538	3173565	3
[>	Sc	45		ug/L			603049	719592✓	2
[	V	51	44.206	ug/L	1.632	3	5204	670496	3
[	V-1	51	44.516	ug/L	1.733	3	161	668641	3
[	Cr	52	29.603	ug/L	0.853	2	15338	403779	1
[	Cr	53	30.583	ug/L	1.163	3	120	45033	2
[	Mn	55	577.019	ug/L	3.068	0	851	10365379	1
[	Co	59	9.903	ug/L	0.225	2	76	138150	1
[>	Ge	72		ug/L			436831	465989	1
[	Ni	60	17.384	ug/L	0.063	0	19	49110	1
[	Ni	62	20.026	ug/L	0.056	0	34	7985	1
[	Cu	63	36.918	ug/L	0.750	2	79	234166	2
[	Cu	65	37.205	ug/L	0.679	1	33	106606	0
[	Zn	66	360.548	ug/L	6.063	1	137	608688	0
[	Zn	67	344.307	ug/L	6.832	1	26	94737	0
[	Zn	68	356.740	ug/L	5.710	1	127	433254	0
[	As	75	20.714	ug/L	0.527	2	255	32862	1
[	As-1	75	20.568	ug/L	0.578	2	8509	41407	0
[	Se	82	~0.135	ug/L	0.088	65	6	29	49
[	Se	78	-0.154	ug/L	0.307	198	8644	9153	0
[	Mo	98	0.237	ug/L	0.007	3	14	1088	1
	Y	89		ug/L			278872	425552	2
	Kr	83		ug/L			509	710	2
[>	In	115		ug/L			878990	929813	1
[	Ag	107	0.199	ug/L	0.007	3	24	2610	3
[	Cd	111	9.206	ug/L	0.142	1	66	41740	2
[	Cd	114	9.113	ug/L	0.106	1	45	102614	0
[	Sb	121	0.336	ug/L	0.003	0	270	5111	0
[	Sb	123	0.344	ug/L	0.014	4	194	3992	2
[	Ba	135	123.605	ug/L	1.265	1	45	498333	0
[	Ba	137	122.583	ug/L	1.314	1	76	853452	0
[>	Tb	159		ug/L			958896	1011445	1
[	Tl	205	0.412	ug/L	0.013	3	228	12241	1
[	Pb	208	397.071	ug/L	2.646	0	272	15274029	0
[	Bi	209		ug/L			2065247	2010359	3
[	Th	232	6.675	ug/L	0.092	1	1210	246150	0
[	U	238	0.664	ug/L	0.015	2	68	24850	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:15:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	627807	0
[	Be	9	0.619	ug/L	0.017	2	9	1214	2
	C	13		ug/L			57054	99387	2
	Cl	37		ug/L			3021538	3184867	1
[>	Sc	45		ug/L			603049	690128	2
[	V	51	29.331	ug/L	0.815	2	5204	428594	0
[	V-1	51	29.344	ug/L	0.691	2	161	422719	0
[	Cr	52	28.719	ug/L	0.880	3	15338	376172	0
[	Cr	53	28.759	ug/L	1.020	3	120	40628	2
[	Mn	55	797.694	ug/L	24.178	3	851	13736539	0
[	Co	59	8.467	ug/L	0.384	4	76	113241	2
[>	Ge	72		ug/L			436831	458854	1
[	Ni	60	19.758	ug/L	0.297	1	19	54952	0
[	Ni	62	21.277	ug/L	0.598	2	34	8349	1
[	Cu	63	27.827	ug/L	0.452	1	79	173814	1
[	Cu	65	27.739	ug/L	0.353	1	33	78282	0
[	Zn	66	331.551	ug/L	4.938	1	137	551203	0
[	Zn	67	326.018	ug/L	8.827	2	26	88341	2
[	Zn	68	329.851	ug/L	5.705	1	127	394481	0
[	As	75	12.078	ug/L	0.138	1	255	18983	0
[	As-1	75	12.013	ug/L	0.214	1	8509	27533	0
[	Se	82	0.105	ug/L	0.081	77	6	24	55
[	Se	78	0.074	ug/L	0.297	403	8644	9110	0
[	Mo	98	0.291	ug/L	0.003	0	14	1310	2
	Y	89		ug/L			278872	441711	1
	Kr	83		ug/L			509	668	6
[>	In	115		ug/L			878990	904173	1
[	Ag	107	0.158	ug/L	0.005	2	24	2014	1
[	Cd	111	5.749	ug/L	0.162	2	66	25366	2
[	Cd	114	5.692	ug/L	0.074	1	45	62331	0
[	Sb	121	0.247	ug/L	0.007	2	270	3735	1
[	Sb	123	0.242	ug/L	0.002	0	194	2793	1
[	Ba	135	221.235	ug/L	6.384	2	45	867153	1
[	Ba	137	220.712	ug/L	4.251	1	76	1493989	0
[>	Tb	159		ug/L			958896	1035139	1
[	Tl	205	0.284	ug/L	0.006	2	228	8705	1
[	Pb	208	229.869	ug/L	3.576	1	272	9048952	0
[	Bi	209		ug/L			2065247	2052299	4
[	Th	232	6.371	ug/L	0.101	1	1210	240520	1
[	U	238	0.848	ug/L	0.012	1	68	32452	1

VR34 : 00353

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:19:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	634791	0
[	**Be**	**9**	**0.709**	ug/L	0.013	1	9	1402	1
	C	**13**		ug/L			57054	82537	4
	Cl	**37**		ug/L			3021538	3186646	0
[>	**Sc**	**45**		ug/L			603049	713515	2
|	**V**	**51**	**26.540**	ug/L	1.328	5	5204	401318	1
|	**V-1**	**51**	**26.862**	ug/L	1.123	4	161	399922	1
|	**Cr**	**52**	**20.824**	ug/L	1.112	5	15338	286854	2
|	**Cr**	**53**	**21.864**	ug/L	0.442	2	120	31967	1
|	**Mn**	**55**	**799.831**	ug/L	25.941	3	851	14238033	0
[	**Co**	**59**	**9.299**	ug/L	0.482	5	76	128541	2
[>	**Ge**	**72**		ug/L			436831	460917	0
|	**Ni**	**60**	**21.783**	ug/L	0.370	1	19	60867	2
|	**Ni**	**62**	**23.877**	ug/L	0.259	1	34	9410	1
|	**Cu**	**63**	**23.571**	ug/L	0.331	1	79	147925	2
|	**Cu**	**65**	**24.848**	ug/L	0.191	0	33	70445	0
|	**Zn**	**66**	**192.884**	ug/L	4.787	2	137	322157	1
|	**Zn**	**67**	**194.346**	ug/L	6.469	3	26	52906	2
|	**Zn**	**68**	**193.200**	ug/L	1.050	0	127	232172	0
|	**As**	**75**	**11.985**	ug/L	0.137	1	255	18924	0
|	**As-1**	**75**	**11.912**	ug/L	0.234	1	8509	27502	0
|	**Se**	**82**	**-0.040**	ug/L	0.027	67	6	0	1847
|	**Se**	**78**	**0.037**	ug/L	0.383	1044	8644	9135	1
[	**Mo**	**98**	**0.381**	ug/L	0.005	1	14	1718	1
	Y	**89**		ug/L			278872	448296	0
	Kr	**83**		ug/L			509	743	2
[>	**In**	**115**		ug/L			878990	903323	0
|	**Ag**	**107**	**0.154**	ug/L	0.006	3	24	1967	4
|	**Cd**	**111**	**2.884**	ug/L	0.021	0	66	12749	0
|	**Cd**	**114**	**2.750**	ug/L	0.051	1	45	30112	1
|	**Sb**	**121**	**0.117**	ug/L	0.006	5	270	1917	5
|	**Sb**	**123**	**0.116**	ug/L	0.005	4	194	1444	2
|	**Ba**	**135**	**183.878**	ug/L	2.148	1	45	720205	0
[	**Ba**	**137**	**184.971**	ug/L	2.397	1	76	1251056	0
[>	**Tb**	**159**		ug/L			958896	1032043	1
|	**Tl**	**205**	**0.214**	ug/L	0.003	1	228	6605	2
|	**Pb**	**208**	**109.815**	ug/L	1.674	1	272	4310341	0
|	**Bi**	**209**		ug/L			2065247	1991982	0
|	**Th**	**232**	**7.461**	ug/L	0.115	1	1210	280602	0
[	**U**	**238**	**1.094**	ug/L	0.014	1	68	41741	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:23:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	643323	3
[	Be	9	0.648	ug/L	0.024	3	9	1300	2
	C	13		ug/L			57054	87482	2
	Cl	37		ug/L			3021538	3156524	4
[>	Sc	45		ug/L			603049	696089	1
[	V	51	29.593	ug/L	0.631	2	5204	436164	0
[	V-1	51	30.253	ug/L	0.793	2	161	439600	1
[	Cr	52	54.022	ug/L	1.912	3	15338	698182	1
[	Cr	53	56.238	ug/L	2.009	3	120	79993	1
[	Mn	55	1111.511	ug/L	28.696	2	851	19309081	1
[	Co	59	9.368	ug/L	0.211	2	76	126419	1
[>	Ge	72		ug/L			436831	459664	1
[	Ni	60	35.643	ug/L	0.470	1	19	99303	1
[	Ni	62	38.162	ug/L	0.597	1	34	14977	2
[	Cu	63	26.005	ug/L	0.439	1	79	162729	2
[	Cu	65	26.563	ug/L	0.190	0	33	75099	0
[	Zn	66	271.190	ug/L	3.955	1	137	451717	1
[	Zn	67	273.458	ug/L	2.539	0	26	74243	1
[	Zn	68	279.919	ug/L	6.698	2	127	335359	1
[	As	75	15.060	ug/L	0.285	1	255	23644	0
[	As-1	75	15.031	ug/L	0.324	2	8509	32263	0
[	Se	82	0.002	ug/L	0.090	3605	6	7	215
[	Se	78	0.169	ug/L	0.137	81	8644	9168	0
[	Mo	98	0.361	ug/L	0.013	3	14	1624	4
	Y	89		ug/L			278872	416074	1
	Kr	83		ug/L			509	709	4
[>	In	115		ug/L			878990	909213	0
[	Ag	107	0.225	ug/L	0.004	1	24	2878	2
[	Cd	111	5.508	ug/L	0.134	2	66	24443	2
[	Cd	114	5.468	ug/L	0.077	1	45	60228	1
[	Sb	121	0.141	ug/L	0.016	11	270	2263	9
[	Sb	123	0.152	ug/L	0.027	17	194	1833	15
[	Ba	135	387.752	ug/L	5.475	1	45	1528638	1
[	Ba	137	392.451	ug/L	1.553	0	76	2671802	0
[>	Tb	159		ug/L			958896	1013175	0
[	Tl	205	0.303	ug/L	0.005	1	228	9085	1
[	Pb	208	307.350	ug/L	0.621	0	272	11843813	0
[	Bi	209		ug/L			2065247	2013961	2
[	Th	232	4.724	ug/L	0.078	1	1210	174883	1
[	U	238	1.193	ug/L	0.028	2	68	44687	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:27:27

rr Ag, Be

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	652663	2
[	Be	9	0.471	ug/L	0.013	2	9	963	4
	C	13		ug/L			57054	84531	2
	Cl	37		ug/L			3021538	3207311	1
[>	Sc	45		ug/L			603049	685555	1
[	V	51	18.195	ug/L	0.560	3	5204	266379	1
[	V-1	51	18.370	ug/L	0.529	2	161	262972	1
[	Cr	52	13.358	ug/L	0.642	4	15338	183124	2
[	Cr	53	13.920	ug/L	0.482	3	120	19603	1
[	Mn	55	523.722	ug/L	2.934	0	851	8963032	1
[	Co	59	5.883	ug/L	0.188	3	76	78211	2
[>	Ge	72		ug/L			436831	458745	0
[	Ni	60	14.289	ug/L	0.312	2	19	39738	1
[	Ni	62	15.336	ug/L	0.245	1	34	6028	1
[	Cu	63	17.386	ug/L	0.242	1	79	108599	0
[	Cu	65	17.844	ug/L	0.583	3	33	50353	2
[	Zn	66	191.139	ug/L	3.828	2	137	317756	1
[	Zn	67	184.204	ug/L	3.579	1	26	49914	1
[	Zn	68	189.967	ug/L	1.510	0	127	227220	1
[	As	75	12.381	ug/L	0.191	1	255	19448	0
[	As-1	75	12.379	ug/L	0.279	2	8509	28095	0
[	Se	82	~~0.067~~	ug/L	0.126	187	6	17	118
[	Se	78	0.216	ug/L	0.364	168	8644	9169	1
[	Mo	98	0.217	ug/L	0.011	5	14	981	4
	Y	89		ug/L			278872	395601	2
	Kr	83		ug/L			509	641	4
[>	In	115		ug/L			878990	905886	1
[	Ag	107	0.121	ug/L	0.008	6	24	1550	4
[	Cd	111	3.603	ug/L	0.070	1	66	15952	0
[	Cd	114	3.553	ug/L	0.137	3	45	38991	2
[	Sb	121	~~0.146~~	ug/L	0.008	5	270	2315	3
[	Sb	123	0.141	ug/L	0.006	4	194	1713	1
[	Ba	135	161.768	ug/L	2.621	1	45	635327	0
[	Ba	137	160.412	ug/L	5.522	3	76	1087689	1
[>	Tb	159		ug/L			958896	1002831	1
[	Tl	205	~~0.175~~	ug/L	0.003	1	228	5304	0
[	Pb	208	131.239	ug/L	1.996	1	272	5005105	0
[	Bi	209		ug/L			2065247	2018312	3
[	Th	232	5.026	ug/L	0.147	2	1210	184049	1
[	U	238	0.843	ug/L	0.025	2	68	31261	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:32:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			617808	653775	1
Be	9	0.566	ug/L	0.019	3	9	1154	1
C	13		ug/L			57054	88180	0
Cl	37		ug/L			3021538	3192451	2
> Sc	45		ug/L			603049	689360	0
V	51	25.239	ug/L	0.115	0	5204	369379	0
V-1	51	25.559	ug/L	0.165	0	161	367939	0
Cr	52	30.341	ug/L	0.254	0	15338	396155	0
Cr	53	31.398	ug/L	0.809	2	120	44304	1
Mn	55	770.463	ug/L	15.432	2	851	13258461	1
Co	59	8.881	ug/L	0.234	2	76	118706	1
> Ge	72		ug/L			436831	462688	1
Ni	60	24.190	ug/L	0.360	1	19	67837	0
Ni	62	25.864	ug/L	0.503	1	34	10227	0
Cu	63	23.596	ug/L	0.481	2	79	148649	2
Cu	65	23.934	ug/L	0.608	2	33	68107	1
Zn	66	383.476	ug/L	7.059	1	137	642815	1
Zn	67	370.251	ug/L	10.096	2	26	101149	1
Zn	68	381.800	ug/L	8.868	2	127	460405	1
As	75	17.655	ug/L	0.222	1	255	27854	0
As-1	75	17.627	ug/L	0.304	1	8509	36527	0
Se	82	0.111	ug/L	0.065	59	6	25	43
Se	78	0.191	ug/L	0.364	191	8644	9237	0
Mo	98	0.322	ug/L	0.008	2	14	1460	1
Y	89		ug/L			278872	395393	0
Kr	83		ug/L			509	669	3
> In	115		ug/L			878990	947713	0
Ag	107	0.267	ug/L	0.003	1	24	3551	1
Cd	111	7.602	ug/L	0.073	0	66	35140	1
Cd	114	7.487	ug/L	0.127	1	45	85934	0
Sb	121	0.237	ug/L	0.002	0	270	3763	1
Sb	123	0.232	ug/L	0.005	1	194	2810	2
Ba	135	189.764	ug/L	1.353	0	45	779802	0
Ba	137	185.530	ug/L	1.396	0	76	1316577	0
> Tb	159		ug/L			958896	1019150	0
Tl	205	0.380	ug/L	0.007	1	228	11393	1
Pb	208	396.198	ug/L	2.936	0	272	15357254	0
Bi	209		ug/L			2065247	2028655	2
Th	232	5.673	ug/L	0.035	0	1210	211017	0
U	238	0.534	ug/L	0.007	1	68	20169	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:36:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	660625	2
	Be	9	0.612	ug/L	0.016	2	9	1262	0
	C	13		ug/L			57054	84407	2
	Cl	37		ug/L			3021538	3210669	1
>	Sc	45		ug/L			603049	708851 ✓	1
	V	51	22.776	ug/L	0.628	2	5204	343256	1
	V-1	51	22.986	ug/L	0.561	2	161	340186	0
	Cr	52	22.034	ug/L	0.584	2	15338	300725	1
	Cr	53	22.717	ug/L	0.612	2	120	33000	2
	Mn	55	1026.895	ug/L	6.639	0	851	18172353	2
	Co	59	7.515	ug/L	0.304	4	76	103265	2
>	Ge	72		ug/L			436831	471237 ✓	3
	Ni	60	23.348	ug/L	0.615	2	19	66661	1
	Ni	62	25.157	ug/L	1.738	6	34	10121	4
	Cu	63	30.763	ug/L	0.770	2	79	197280	2
	Cu	65	31.129	ug/L	1.524	4	33	90128	1
	Zn	66	493.972	ug/L	27.434	5	137	842409	2
	Zn	67	454.946	ug/L	17.304	3	26	126505	0
	Zn	68	481.211	ug/L	19.616	4	127	590608	2
	As	75	16.873	ug/L	0.513	3	255	27111	0
	As-1	75	16.747	ug/L	0.686	4	8509	35784	0
	Se	82	0.263	ug/L	0.061	23	6	52	17
	Se	78	0.057	ug/L	0.713	1252	8644	9343	0
	Mo	98	0.421	ug/L	0.025	5	14	1938	2
	Y	89		ug/L			278872	437613	2
	Kr	83		ug/L			509	719	1
>	In	115		ug/L			878990	928162	0
	Ag	107	0.249	ug/L	0.005	1	24	3243	1
	Cd	111	8.745	ug/L	0.121	1	66	39577	0
	Cd	114	8.539	ug/L	0.080	0	45	95977	0
	Sb	121	0.262	ug/L	0.007	2	270	4039	2
	Sb	123	0.276	ug/L	0.013	4	194	3233	3
	Ba	135	280.954	ug/L	4.432	1	45	1130643	1
	Ba	137	278.811	ug/L	6.038	2	76	1937532	1
>	Tb	159		ug/L			958896	1033812	1
	Tl	205	0.381	ug/L	0.014	3	228	11609	2
	Pb	208	301.659	ug/L	4.591	1	272	11859632	0
	Bi	209		ug/L			2065247	2051679	4
	Th	232	4.880	ug/L	0.039	0	1210	184295	0
	U	238	0.725	ug/L	0.017	2	68	27737	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:40:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	616483	1
[	Be	9	55.576	ug/L	2.923	5	9	106116	3
	C	13		ug/L			57054	58848	2
	Cl	37		ug/L			3021538	3150251	1
[>	Sc	45		ug/L			603049	643028	1
[	V	51	49.820	ug/L	0.832	1	5204	674616	0
[	V-1	51	50.171	ug/L	0.982	1	161	673446	0
[	Cr	52	50.646	ug/L	0.930	1	15338	605818	0
[	Cr	53	51.796	ug/L	2.086	4	120	68083	3
[	Mn	55	50.170	ug/L	0.811	1	851	806097	0
[	Co	59	51.262	ug/L	1.457	2	76	638682	1
[>	Ge	72		ug/L			436831	461004	1
[	Ni	60	48.188	ug/L	0.909	1	19	134606	0
[	Ni	62	48.875	ug/L	1.530	3	34	19220	1
[	Cu	63	48.715	ug/L	1.715	3	79	305566	2
[	Cu	65	50.114	ug/L	0.467	0	33	142061	1
[	Zn	66	49.304	ug/L	1.859	3	137	82447	2
[	Zn	67	51.467	ug/L	1.080	2	26	14033	0
[	Zn	68	49.986	ug/L	0.926	1	127	60167	0
[	As	75	49.467	ug/L	1.070	2	255	77261	0
[	As-1	75	49.682	ug/L	1.243	2	8509	86234	0
[	Se	82	50.224	ug/L	0.736	1	6	8518	0
[	Se	78	50.984	ug/L	1.271	2	8644	31011	0
[	Mo	98	44.266	ug/L	0.504	1	14	198080	1
	Y	89		ug/L			278872	303749	0
	Kr	83		ug/L			509	548	3
[>	In	115		ug/L			878990	870990	1
[	Ag	107	40.516	ug/L	1.634	4	24	492044	2
[	Cd	111	50.687	ug/L	1.055	2	66	214912	1
[	Cd	114	50.694	ug/L	1.216	2	45	534397	1
[	Sb	121	50.374	ug/L	1.664	3	270	678078	1
[	Sb	123	49.806	ug/L	1.368	2	194	513802	1
[	Ba	135	50.102	ug/L	1.225	2	45	189212	1
[	Ba	137	49.432	ug/L	1.149	2	76	322381	0
[>	Tb	159		ug/L			958896	966250	0
[	Tl	205	51.459	ug/L	0.678	1	228	1433542	1
[	Pb	208	50.654	ug/L	0.699	1	272	1861693	0
[	Bi	209		ug/L			2065247	1946675	1
[	Th	232	51.835	ug/L	0.411	0	1210	1818073	0
[	U	238	53.203	ug/L	0.515	0	68	1896780	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB11
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:47:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	607953 ✓	1
	Be	9	0.004	ug/L	0.004	99	9	15	42
	C	13		ug/L			57054	59001	3
	Cl	37		ug/L			3021538	3148004	5
>	Sc	45		ug/L			603049	623896 ✓	2
	V	51	0.004	ug/L	0.012	301	5204	5433	1
	V-1	51	0.001	ug/L	0.006	1091	161	173	46
	Cr	52	-0.001	ug/L	0.028	3090	15338	15853	0
	Cr	53	-0.012	ug/L	0.005	39	120	109	5
	Mn	55	0.129	ug/L	0.142	110	851	2867	74
	Co	59	0.003	ug/L	0.004	118	76	120	39
>	Ge	72		ug/L			436831	446773 ✓	2
	Ni	60	0.008	ug/L	0.007	85	19	42	46
	Ni	62	0.018	ug/L	0.022	125	34	41	18
	Cu	63	0.008	ug/L	0.007	92	79	128	34
	Cu	65	0.010	ug/L	0.008	86	33	60	39
	Zn	66	0.072	ug/L	0.056	78	137	257	36
	Zn	67	0.049	ug/L	0.050	100	26	40	33
	Zn	68	0.074	ug/L	0.068	91	127	217	37
	As	75	0.005	ug/L	0.019	381	255	269	11
	As-1	75	0.166	ug/L	0.139	83	8509	8951	0
	Se	82	0.033	ug/L	0.073	221	6	11	102
	Se	78	0.590	ug/L	0.478	81	8644	9084	0
	Mo	98	0.008	ug/L	0.001	11	14	47	8
	Y	89		ug/L			278872	295538	0
	Kr	83		ug/L			509	508	4
>	In	115		ug/L			878990	848929 ✓	1
	Ag	107	0.003	ug/L	0.002	75	24	53	42
	Cd	111	0.005	ug/L	0.006	142	66	83	30
	Cd	114	0.004	ug/L	0.004	96	45	81	45
	Sb	121	0.039	ug/L	0.002	6	270	772	4
	Sb	123	0.042	ug/L	0.002	5	194	609	4
	Ba	135	0.044	ug/L	0.041	92	45	206	72
	Ba	137	0.045	ug/L	0.038	84	76	358	67
>	Tb	159		ug/L			958896	919765 ✓	1
	Tl	205	-0.001	ug/L	0.002	177	228	189	26
	Pb	208	0.051	ug/L	0.046	89	272	2047	76
	Bi	209		ug/L			2065247	1956007	0
	Th	232	0.067	ug/L	0.007	10	1210	3398	5
	U	238	0.003	ug/L	0.002	84	68	163	50

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:51:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Tn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	634735	1
[	Be	9	0.107	ug/L	0.014	12	9	219	11
	C	13		ug/L			57054	65064	2
	Cl	37		ug/L			3021538	3129639	4
[>	Sc	45		ug/L			603049	645174	0
[	V	51	4.727	ug/L	0.065	1	5204	69267	1
[	V-1	51	4.810	ug/L	0.127	2	161	64950	2
[	Cr	52	5.081	ug/L	0.118	2	15338	75757	1
[	Cr	53	5.355	ug/L	0.104	1	120	7180	1
[	Mn	55	229.183	ug/L	3.144	1	851	3692038	1
[	Co	59	1.771	ug/L	0.051	2	76	22215	2
[>	Ge	72		ug/L			436831	462941	2
[	Ni	60	4.232	ug/L	0.103	2	19	11889	1
[	Ni	62	4.573	ug/L	0.113	2	34	1840	4
[	Cu	63	5.044	ug/L	0.124	2	79	31845	0
[	Cu	65	5.259	ug/L	0.120	2	33	14999	2
[	Zn	66	92.356	ug/L	3.994	4	137	154921	1
[	Zn	67	89.731	ug/L	2.626	2	26	24542	0
[	Zn	68	93.454	ug/L	2.663	2	127	112828	1
[	As	75	3.179	ug/L	0.068	2	255	5239	1
[	As-1	75	3.141	ug/L	0.194	6	8509	13919	0
[	Se	82	0.040	ug/L	0.089	223	6	13	114
[	Se	78	-0.091	ug/L	0.498	549	8644	9118	0
[	Mo	98	0.114	ug/L	0.007	6	14	527	4
	Y	89		ug/L			278872	320806	1
	Kr	83		ug/L			509	548	4
[>	In	115		ug/L			878990	902315	1
[	Ag	107	0.067	ug/L	0.000	0	24	874	1
[	Cd	111	1.978	ug/L	0.035	1	66	8754	1
[	Cd	114	1.961	ug/L	0.067	3	45	21459	1
[	Sb	121	0.060	ug/L	0.004	6	270	1116	4
[	Sb	123	0.064	ug/L	0.012	17	194	886	13
[	Ba	135	42.971	ug/L	1.069	2	45	168116	1
[	Ba	137	42.211	ug/L	1.269	3	76	285173	1
[>	Tb	159		ug/L			958896	968474	1
[	Tl	205	0.099	ug/L	0.002	2	228	2980	1
[	Pb	208	102.091	ug/L	1.536	1	272	3760188	0
[	Bi	209		ug/L			2065247	2079297	3
[	Th	232	1.047	ug/L	0.029	2	1210	38005	1
[	U	238	0.101	ug/L	0.002	1	68	3666	2

ICP-MS Quantitative Analysis - Summary Report

rr Ag, Be, Pb, Zn

Sample ID: VR34 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 21:56:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	646979	1
	Be	9	0.520	ug/L	0.017	3	9	1052	3
	C	13		ug/L			57054	85800	4
	Cl	37		ug/L			3021538	3138989	0
>	Sc	45		ug/L			603049	693283 ✓	1
	V	51	22.422	ug/L	0.482	2	5204	330591	0
	V-1	51	22.715	ug/L	0.623	2	161	328772	0
	Cr	52	23.870	ug/L	0.285	1	15338	317176	0
	Cr	53	24.832	ug/L	0.773	3	120	35259	1
	Mn	55	1007.336	ug/L	34.666	3	851	17427152	1
	Co	59	8.140	ug/L	0.079	0	76	109437	1
>	Ge	72		ug/L			436831	466272 ✓	0
	Ni	60	20.797	ug/L	0.179	0	19	58782	0
	Ni	62	22.230	ug/L	0.406	1	34	8864	1
	Cu	63	24.553	ug/L	0.312	1	79	155857	1
	Cu	65	24.910	ug/L	0.581	2	33	71435	1
	Zn	66	440.001	ug/L	2.356	0	137	743331	0
	Zn	67	422.378	ug/L	3.804	0	26	116311	1
	Zn	68	432.427	ug/L	3.790	0	127	525550	1
	As	75	15.656	ug/L	0.246	1	255	24924	1
	As-1	75	15.512	ug/L	0.281	1	8509	33484	0
	Se	82	0.213	ug/L	0.070	32	6	43	27
	Se	78	-0.175	ug/L	0.174	99	8644	9150	0
	Mo	98	0.546	ug/L	0.002	0	14	2487	1
	Y	89		ug/L			278872	385620	1
	Kr	83		ug/L			509	645	3
>	In	115		ug/L			878990	953123 ✓	1
	Ag	107	0.305	ug/L	0.017	5	24	4083	3
	Cd	111	8.939	ug/L	0.164	1	66	41535	0
	Cd	114	9.009	ug/L	0.183	2	45	103964	0
	Sb	121	0.286	ug/L	0.015	5	270	4497	3
	Sb	123	0.283	ug/L	0.012	4	194	3408	2
	Ba	135	202.463	ug/L	5.785	2	45	836477	1
	Ba	137	202.155	ug/L	5.516	2	76	1442348	1
>	Tb	159		ug/L			958896	1016147 ✓	0
	Tl	205	0.434	ug/L	0.008	1	228	12955	1
	Pb	208	488.977	ug/L	1.988	0	272	18897880	0
	Bi	209		ug/L			2065247	1990154	0
	Th	232	4.819	ug/L	0.009	0	1210	178937	0
	U	238	0.480	ug/L	0.007	1	68	18087	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:00:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rv Ag, Be, Pb, Tl

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	656928	2
[	**Be**	**9**	**0.529**	ug/L	0.004	0	9	1086	2
	C	**13**		ug/L			57054	82578	1
	Cl	**37**		ug/L			3021538	3173431	2
[>	**Sc**	**45**		ug/L			603049	688448	1
[	**V**	**51**	**21.944**	ug/L	0.582	2	5204	321450	1
[	**V-1**	**51**	**22.144**	ug/L	0.643	2	161	318343	2
[	**Cr**	**52**	**24.705**	ug/L	0.378	1	15338	325373	0
[	**Cr**	**53**	**25.367**	ug/L	0.498	1	120	35773	1
[	**Mn**	**55**	**1016.898**	ug/L	22.207	2	851	17473680	1
[	**Co**	**59**	**8.424**	ug/L	0.298	3	76	112443	2
[>	**Ge**	**72**		ug/L			436831	458443	0
[	**Ni**	**60**	**22.817**	ug/L	0.166	0	19	63408	0
[	**Ni**	**62**	**23.815**	ug/L	0.498	2	34	9335	2
[	**Cu**	**63**	**24.553**	ug/L	0.301	1	79	153239	1
[	**Cu**	**65**	**24.811**	ug/L	0.716	2	33	69965	2
[	**Zn**	**66**	**446.200**	ug/L	4.637	1	137	741158	0
[	**Zn**	**67**	**426.629**	ug/L	8.303	1	26	115506	2
[	**Zn**	**68**	**443.016**	ug/L	5.774	1	127	529367	1
[	**As**	**75**	**15.843**	ug/L	0.079	0	255	24796	0
[	**As-1**	**75**	**15.824**	ug/L	0.059	0	8509	33408	0
[	**Se**	**82**	**0.218**	ug/L	0.049	22	6	43	18
[	**Se**	**78**	**0.303**	ug/L	0.128	42	8644	9201	0
[	**Mo**	**98**	**0.341**	ug/L	0.019	5	14	1533	5
	Y	**89**		ug/L			278872	385235	1
	Kr	**83**		ug/L			509	644	1
[>	**In**	**115**		ug/L			878990	945697	1
[	**Ag**	**107**	**0.285**	ug/L	0.010	3	24	3783	2
[	**Cd**	**111**	**8.749**	ug/L	0.023	0	66	40342	1
[	**Cd**	**114**	**8.942**	ug/L	0.148	1	45	102394	0
[	**Sb**	**121**	**0.254**	ug/L	0.015	6	270	3998	4
[	**Sb**	**123**	**0.244**	ug/L	0.008	3	194	2936	1
[	**Ba**	**135**	**202.330**	ug/L	2.282	1	45	829665	1
[	**Ba**	**137**	**199.024**	ug/L	4.531	2	76	1409199	1
[>	**Tb**	**159**		ug/L			958896	1009842	2
[	**Tl**	**205**	**0.419**	ug/L	0.007	1	228	12441	0
[	**Pb**	**208**	**486.445**	ug/L	7.680	1	272	18679041	0
[	**Bi**	**209**		ug/L			2065247	1987002	0
[	**Th**	**232**	**7.131**	ug/L	0.159	2	1210	262410	0
[	**U**	**238**	**0.707**	ug/L	0.013	1	68	26395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:04:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Tn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	650644	1
[	Be	9	26.581	ug/L	0.280	1	9	53597	1
	C	13		ug/L			57054	85867	4
	Cl	37		ug/L			3021538	3229154	3
[>	Sc	45		ug/L			603049	696132	2
[	V	51	45.185	ug/L	1.567	3	5204	662699	1
[	V-1	51	45.685	ug/L	1.802	3	161	663607	1
[	Cr	52	45.200	ug/L	0.580	1	15338	587217	1
[	Cr	53	46.833	ug/L	1.364	2	120	66646	0
[	Mn	55	986.210	ug/L	30.866	3	851	17132780	2
[	Co	59	30.938	ug/L	0.918	2	76	417241	0
[>	Ge	72		ug/L			436831	464281	0
[	Ni	60	44.926	ug/L	0.612	1	19	126424	2
[	Ni	62	46.761	ug/L	0.397	0	34	18528	1
[	Cu	63	48.120	ug/L	0.828	1	79	304052	1
[	Cu	65	47.938	ug/L	0.651	1	33	136870	1
[	Zn	66	489.373	ug/L	6.710	1	137	823208	1
[	Zn	67	466.149	ug/L	5.755	1	26	127801	0
[	Zn	68	490.676	ug/L	4.450	0	127	593793	1
[	As	75	38.844	ug/L	0.338	0	255	61175	0
[	As-1	75	39.169	ug/L	0.238	0	8509	70402	0
[	Se	82	74.860	ug/L	0.170	0	6	12786	0
[	Se	78	76.263	ug/L	0.444	0	8644	42172	0
[	Mo	98	18.658	ug/L	0.188	1	14	84107	1
	Y	89		ug/L			278872	390415	1
	Kr	83		ug/L			509	635	2
[>	In	115		ug/L			878990	962183	0
[	Ag	107	16.996	ug/L	0.478	2	24	228097	2
[	Cd	111	30.177	ug/L	0.321	1	66	141399	0
[	Cd	114	30.587	ug/L	0.395	1	45	356298	1
[	Sb	121	1.235	ug/L	0.034	2	270	18660	2
[	Sb	123	1.189	ug/L	0.025	2	194	13763	2
[	Ba	135	211.397	ug/L	1.160	0	45	881966	0
[	Ba	137	211.669	ug/L	2.256	1	76	1525025	1
[>	Tb	159		ug/L			958896	1016927	1
[	Tl	205	25.286	ug/L	0.711	2	228	741343	1
[	Pb	208	486.838	ug/L	6.884	1	272	18827596	0
[	Bi	209		ug/L			2065247	2111098	0
[	Th	232	29.179	ug/L	0.463	1	1210	1077562	0
[	U	238	25.522	ug/L	0.427	1	68	957636	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:08:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	650846	1
[	Be	9	28.453	ug/L	0.511	1	9	57390	2
	C	13		ug/L			57054	88156	5
	Cl	37		ug/L			3021538	3231749	0
[>	Sc	45		ug/L			603049	692472	0
|	V	51	46.358	ug/L	0.374	0	5204	676511	0
|	V-1	51	46.432	ug/L	0.325	0	161	671313	0
|	Cr	52	48.617	ug/L	0.528	1	15338	627073	1
|	Cr	53	48.867	ug/L	0.508	1	120	69196	1
|	Mn	55	1062.875	ug/L	11.316	1	851	18373788	1
[	Co	59	32.113	ug/L	0.598	1	76	431006	1
[>	Ge	72		ug/L			436831	465897	1
|	Ni	60	45.207	ug/L	0.957	2	19	127632	1
|	Ni	62	46.167	ug/L	0.848	1	34	18359	3
|	Cu	63	49.200	ug/L	2.151	4	79	311874	3
|	Cu	65	50.586	ug/L	0.878	1	33	144914	1
|	Zn	66	510.301	ug/L	9.220	1	137	861241	0
|	Zn	67	499.425	ug/L	1.957	0	26	137404	1
|	Zn	68	516.208	ug/L	16.236	3	127	626650	1
|	As	75	41.305	ug/L	0.882	2	255	65247	0
|	As-1	75	41.084	ug/L	0.971	2	8509	73642	0
|	Se	82	82.689	ug/L	0.988	1	6	14171	0
|	Se	78	82.141	ug/L	1.238	1	8644	44865	0
[	Mo	98	22.281	ug/L	0.378	1	14	100771	1
	Y	89		ug/L			278872	386798	0
	Kr	83		ug/L			509	642	3
[>	In	115		ug/L			878990	953958	1
|	Ag	107	18.894	ug/L	0.431	2	24	251341	0
|	Cd	111	32.599	ug/L	0.262	0	66	151427	1
|	Cd	114	32.497	ug/L	1.006	3	45	375165	1
|	Sb	121	22.863	ug/L	0.394	1	270	337262	0
|	Sb	123	22.394	ug/L	0.530	2	194	253138	0
|	Ba	135	222.996	ug/L	2.926	1	45	922263	0
[	Ba	137	222.619	ug/L	3.021	1	76	1589932	0
[>	Tb	159		ug/L			958896	1005210	1
|	Tl	205	26.462	ug/L	0.043	0	228	767015	1
|	Pb	208	515.023	ug/L	7.833	1	272	19687216	0
|	Bi	209		ug/L			2065247	2045782	4
|	Th	232	30.766	ug/L	0.682	2	1210	1122887	0
[	U	238	27.187	ug/L	0.318	1	68	1008311	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:12:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	634114	0
[	Be	9	0.404	ug/L	0.013	3	9	803	3
	C	13		ug/L			57054	96432	5
	Cl	37		ug/L			3021538	3136073	3
[>	Sc	45		ug/L			603049	691510	2
[	V	51	19.877	ug/L	0.792	3	5204	292912	1
[	V-1	51	19.976	ug/L	0.739	3	161	288360	1
[	Cr	52	13.597	ug/L	0.365	2	15338	187736	0
[	Cr	53	13.905	ug/L	0.163	1	120	19758	1
[	Mn	55	521.242	ug/L	22.930	4	851	8992908	2
[	Co	59	5.039	ug/L	0.133	2	76	67584	0
[>	Ge	72		ug/L			436831	463463	0
[	Ni	60	10.466	ug/L	0.153	1	19	29413	1
[	Ni	62	12.086	ug/L	0.251	2	34	4807	2
[	Cu	63	19.744	ug/L	0.126	0	79	124596	0
[	Cu	65	20.289	ug/L	0.321	1	33	57848	1
[	Zn	66	346.964	ug/L	4.277	1	137	582664	1
[	Zn	67	338.400	ug/L	7.180	2	26	92624	1
[	Zn	68	348.565	ug/L	9.357	2	127	421092	2
[	As	75	8.472	ug/L	0.056	0	255	13531	0
[	As-1	75	8.401	ug/L	0.140	1	8509	22164	0
[	Se	82	0.105	ug/L	0.042	40	6	24	29
[	Se	78	0.017	ug/L	0.339	2033	8644	9178	1
[	Mo	98	0.445	ug/L	0.017	3	14	2016	3
	Y	89		ug/L			278872	400767	0
	Kr	83		ug/L			509	648	2
[>	In	115		ug/L			878990	920796	0
[	Ag	107	0.267	ug/L	0.007	2	24	3460	2
[	Cd	111	7.307	ug/L	0.073	1	66	32816	0
[	Cd	114	7.173	ug/L	0.104	1	45	79991	1
[	Sb	121	0.496	ug/L	0.019	3	270	7346	3
[	Sb	123	0.495	ug/L	0.014	2	194	5597	3
[	Ba	135	211.353	ug/L	0.961	0	45	843850	0
[	Ba	137	208.393	ug/L	0.146	0	76	1436836	0
[>	Tb	159		ug/L			958896	1002494	0
[	Tl	205	0.317	ug/L	0.008	2	228	9384	1
[	Pb	208	349.629	ug/L	4.887	1	272	13329971	0
[	Bi	209		ug/L			2065247	2030711	4
[	Th	232	4.224	ug/L	0.032	0	1210	154888	0
[	U	238	0.619	ug/L	0.001	0	68	22971	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:16:42

rr Ag, Be, Pb, Zn

Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	633607	1
[	Be	9	0.392	ug/L	0.005	1	9	778	2
	C	13		ug/L			57054	81008	0
	Cl	37		ug/L			3021538	3175156	3
[>	Sc	45		ug/L			603049	666112	1
[	V	51	21.429	ug/L	0.087	0	5204	303916	2
[	V-1	51	21.625	ug/L	0.248	1	161	300834	2
[	Cr	52	15.600	ug/L	0.371	2	15338	205041	2
[	Cr	53	16.226	ug/L	0.420	2	120	22184	1
[	Mn	55	421.626	ug/L	16.568	3	851	7009310	3
[	Co	59	4.841	ug/L	0.126	2	76	62548	1
[>	Ge	72		ug/L			436831	466351	1
[	Ni	60	10.954	ug/L	0.163	1	19	30975	2
[	Ni	62	12.322	ug/L	0.306	2	34	4929	1
[	Cu	63	21.885	ug/L	0.457	2	79	138920	0
[	Cu	65	22.375	ug/L	0.560	2	33	64169	0
[	Zn	66	474.313	ug/L	14.151	2	137	801161	1
[	Zn	67	446.349	ug/L	8.170	1	26	122902	0
[	Zn	68	467.871	ug/L	11.665	2	127	568535	0
[	As	75	10.183	ug/L	0.182	1	255	16306	0
[	As-1	75	10.085	ug/L	0.285	2	8509	24948	0
[	Se	82	~ 0.250	ug/L	0.003	1	6	49	0
[	Se	78	0.014	ug/L	0.392	2771	8644	9233	0
[	Mo	98	0.243	ug/L	0.008	3	14	1115	1
	Y	89		ug/L			278872	408372	2
	Kr	83		ug/L			509	625	1
[>	In	115		ug/L			878990	926892	0
[	Ag	107	0.342	ug/L	0.006	1	24	4449	2
[	Cd	111	9.623	ug/L	0.123	1	66	43483	0
[	Cd	114	9.693	ug/L	0.268	2	45	108786	1
[	Sb	121	0.322	ug/L	0.010	2	270	4895	2
[	Sb	123	0.312	ug/L	0.014	4	194	3630	3
[	Ba	135	122.446	ug/L	1.466	1	45	492107	0
[	Ba	137	120.908	ug/L	2.200	1	76	839112	1
[>	Tb	159		ug/L			958896	1004547	0
[	Tl	205	0.400	ug/L	0.002	0	228	11826	0
[	Pb	208	392.442	ug/L	2.968	0	272	14994064	1
[	Bi	209		ug/L			2065247	1983145	0
[	Th	232	4.492	ug/L	0.074	1	1210	164964	1
[	U	238	1.338	ug/L	0.006	0	68	49650	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:20:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	637142	0
	Be	9	0.454	ug/L	0.003	0	9	904	0
	C	13		ug/L			57054	96330	1
	Cl	37		ug/L			3021538	3165138	2
>	Sc	45		ug/L			603049	685149 ✓	1
	V	51	23.050	ug/L	0.332	1	5204	335797	1
	V-1	51	23.207	ug/L	0.423	1	161	332038	1
	Cr	52	20.139	ug/L	0.177	0	15338	267209	1
	Cr	53	20.644	ug/L	0.901	4	120	28992	3
	Mn	55	533.658	ug/L	10.773	2	851	9126850	0
	Co	59	5.880	ug/L	0.150	2	76	78148	2
>	Ge	72		ug/L			436831	462052	1
	Ni	60	12.929	ug/L	0.349	2	19	36210	1
	Ni	62	15.213	ug/L	0.354	2	34	6021	0
	Cu	63	20.532	ug/L	0.266	1	79	129147	0
	Cu	65	21.311	ug/L	1.127	5	33	60536	3
	Zn	66	326.898	ug/L	9.104	2	137	547132	1
	Zn	67	320.759	ug/L	10.344	3	26	87503	1
	Zn	68	326.889	ug/L	6.221	1	127	393630	0
	As	75	10.872	ug/L	0.330	3	255	17228	1
	As-1	75	10.843	ug/L	0.390	3	8509	25898	0
	Se	82	0.166	ug/L	0.084	50	6	34	39
	Se	78	0.166	ug/L	0.278	167	8644	9213	0
	Mo	98	0.420	ug/L	0.016	3	14	1897	2
	Y	89		ug/L			278872	410500	1
	Kr	83		ug/L			509	613	5
>	In	115		ug/L			878990	913779	0
	Ag	107	0.204	ug/L	0.009	4	24	2629	4
	Cd	111	6.893	ug/L	0.109	1	66	30727	1
	Cd	114	7.004	ug/L	0.079	1	45	77514	0
	Sb	121	0.341	ug/L	0.004	1	270	5091	0
	Sb	123	0.345	ug/L	0.018	5	194	3930	4
	Ba	135	217.597	ug/L	3.306	1	45	862160	1
	Ba	137	213.780	ug/L	1.553	0	76	1462760	0
>	Tb	159		ug/L			958896	1001372	0
	Tl	205	0.324	ug/L	0.008	2	228	9602	1
	Pb	208	260.649	ug/L	5.813	2	272	9926166	1
	Bi	209		ug/L			2065247	1976293	0
	Th	232	5.090	ug/L	0.131	2	1210	186149	1
	U	238	0.738	ug/L	0.014	1	68	27326	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:26:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	641334	1
[	Be	9	0.386	ug/L	0.016	4	9	775	3
	C	13		ug/L			57054	90677	0
	Cl	37		ug/L			3021538	3247278	0
[>	Sc	45		ug/L			603049	694108	1
[	V	51	21.625	ug/L	0.147	0	5204	319507	0
[	V-1	51	21.767	ug/L	0.170	0	161	315532	1
[	Cr	52	19.461	ug/L	0.499	2	15338	262147	1
[	Cr	53	19.919	ug/L	0.428	2	120	28351	1
[	Mn	55	2094.809	ug/L	14.025	0	851	36295856	0
[	Co	59	8.095	ug/L	0.100	1	76	108956	1
[>	Ge	72		ug/L			436831	457266	1
[	Ni	60	16.192	ug/L	0.345	2	19	44877	0
[	Ni	62	17.389	ug/L	0.474	2	34	6806	1
[	Cu	63	17.622	ug/L	0.257	1	79	109703	0
[	Cu	65	18.063	ug/L	0.185	1	33	50809	1
[	Zn	66	485.835	ug/L	15.494	3	137	804640	1
[	Zn	67	464.945	ug/L	20.417	4	26	125486	2
[	Zn	68	483.369	ug/L	18.470	3	127	575831	2
[	As	75	15.073	ug/L	0.319	2	255	23538	0
[	As-1	75	15.089	ug/L	0.456	3	8509	32178	0
[	Se	82	~0.209	ug/L	0.052	24	6	41	21
[	Se	78	0.324	ug/L	0.575	177	8644	9184	1
[	Mo	98	1.015	ug/L	0.035	3	14	4516	1
	Y	89		ug/L			278872	364733	0
	Kr	83		ug/L			509	590	3
[>	In	115		ug/L			878990	919812	2
[	Ag	107	0.222	ug/L	0.004	1	24	2874	1
[	Cd	111	8.382	ug/L	0.308	3	66	37577	2
[	Cd	114	8.392	ug/L	0.359	4	45	93410	1
[	Sb	121	0.302	ug/L	0.020	6	270	4573	3
[	Sb	123	0.301	ug/L	0.017	5	194	3476	2
[	Ba	135	379.703	ug/L	5.895	1	45	1513977	1
[	Ba	137	384.524	ug/L	11.046	2	76	2646981	0
[>	Tb	159		ug/L			958896	1010246	1
[	Tl	205	0.336	ug/L	0.004	1	228	10012	0
[	Pb	208	396.735	ug/L	8.670	2	272	15241024	0
[	Bi	209		ug/L			2065247	2069147	3
[	Th	232	5.443	ug/L	0.106	1	1210	200705	0
[	U	238	0.483	ug/L	0.005	1	68	18081	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:30:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Be, Pb, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			617808	648087	0
[	**Be**	**9**	**0.642**	ug/L	0.035	5	9	1299	6
	C	**13**		ug/L			57054	86911	3
	Cl	**37**		ug/L			3021538	3224994	3
[>	**Sc**	**45**		ug/L			603049	706929	2
	V	**51**	**23.624**	ug/L	0.613	2	5204	354799	0
	V-1	**51**	**23.753**	ug/L	0.815	3	161	350493	1
	Cr	**52**	**20.879**	ug/L	0.557	2	15338	285071	0
	Cr	**53**	**21.295**	ug/L	1.238	5	120	30835	3
	Mn	**55**	**974.078**	ug/L	26.023	2	851	17184280	1
[	**Co**	**59**	**9.042**	ug/L	0.427	4	76	123865	2
[>	**Ge**	**72**		ug/L			436831	461951	2
	Ni	**60**	**22.503**	ug/L	0.578	2	19	62988	0
	Ni	**62**	**23.770**	ug/L	0.643	2	34	9385	1
	Cu	**63**	**28.713**	ug/L	0.732	2	79	180515	2
	Cu	**65**	**28.633**	ug/L	0.666	2	33	81328	1
	Zn	**66**	**452.488**	ug/L	13.179	2	137	757109	2
	Zn	**67**	**435.854**	ug/L	8.966	2	26	118864	0
	Zn	**68**	**451.054**	ug/L	11.892	2	127	542903	1
	As	**75**	**15.037**	ug/L	0.399	2	255	23722	2
	As-1	**75**	**14.956**	ug/L	0.532	3	8509	32299	1
	Se	**82**	**0.105**	ug/L	0.026	24	6	24	16
	Se	**78**	**0.084**	ug/L	0.627	747	8644	9173	0
[	**Mo**	**98**	**0.624**	ug/L	0.030	4	14	2810	2
	Y	**89**		ug/L			278872	421061	1
	Kr	**83**		ug/L			509	713	4
[>	**In**	**115**		ug/L			878990	928054	0
	Ag	**107**	**0.268**	ug/L	0.016	6	24	3500	5
	Cd	**111**	**9.054**	ug/L	0.085	0	66	40967	0
	Cd	**114**	**9.029**	ug/L	0.126	1	45	101476	1
	Sb	**121**	**0.262**	ug/L	0.007	2	270	4048	2
	Sb	**123**	**0.256**	ug/L	0.006	2	194	3020	1
	Ba	**135**	**327.506**	ug/L	3.992	1	45	1317942	1
[	**Ba**	**137**	**336.896**	ug/L	2.620	0	76	2341101	1
[>	**Tb**	**159**		ug/L			958896	1017203	0
	Tl	**205**	**0.360**	ug/L	0.012	3	228	10795	2
	Pb	**208**	**441.317**	ug/L	6.247	1	272	17073180	1
	Bi	**209**		ug/L			2065247	1964287	0
	Th	**232**	**5.128**	ug/L	0.053	1	1210	190505	1
_	**U**	**238**	**0.721**	ug/L	0.015	2	68	27133	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV12
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:34:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	618167	1
	Be	9	54.999	ug/L	0.481	0	9	105364	2
	C	13		ug/L			57054	59933	1
	Cl	37		ug/L			3021538	3111395	0
>	Sc	45		ug/L			603049	632458	2
	V	51	51.281	ug/L	2.473	4	5204	682402	2
	V-1	51	51.847	ug/L	2.352	4	161	684121	2
	Cr	52	49.704	ug/L	1.169	2	15338	584991	1
	Cr	53	51.551	ug/L	0.744	1	120	66653	1
	Mn	55	50.401	ug/L	1.582	3	851	796217	0
	Co	59	49.842	ug/L	0.845	1	76	610759	0
>	Ge	72		ug/L			436831	466781	2
	Ni	60	47.724	ug/L	1.800	3	19	134921	1
	Ni	62	47.469	ug/L	1.160	2	34	18902	1
	Cu	63	48.435	ug/L	2.356	4	79	307472	2
	Cu	65	48.990	ug/L	0.963	1	33	140577	0
	Zn	66	47.958	ug/L	1.707	3	137	81188	0
	Zn	67	51.124	ug/L	2.200	4	26	14106	1
	Zn	68	48.156	ug/L	0.972	2	127	58689	1
	As	75	48.267	ug/L	1.423	2	255	76319	0
	As-1	75	48.294	ug/L	1.747	3	8509	85104	0
	Se	82	48.849	ug/L	1.718	3	6	8386	1
	Se	78	48.882	ug/L	2.614	5	8644	30472	1
	Mo	98	42.879	ug/L	0.899	2	14	194232	0
	Y	89		ug/L			278872	301864	2
	Kr	83		ug/L			509	530	7
>	In	115		ug/L			878990	857186	0
	Ag	107	39.577	ug/L	1.495	3	24	473184	3
	Cd	111	50.633	ug/L	0.569	1	66	211328	1
	Cd	114	51.044	ug/L	0.375	0	45	529680	1
	Sb	121	49.990	ug/L	0.796	1	270	662419	1
	Sb	123	49.589	ug/L	0.604	1	194	503577	1
	Ba	135	50.535	ug/L	0.342	0	45	187867	1
	Ba	137	49.916	ug/L	0.606	1	76	320445	1
>	Tb	159		ug/L			958896	958205	0
	Tl	205	51.256	ug/L	0.258	0	228	1415996	0
	Pb	208	50.448	ug/L	0.356	0	272	1838779	0
	Bi	209		ug/L			2065247	1917820	0
	Th	232	51.734	ug/L	0.322	0	1210	1799479	0
	U	238	52.581	ug/L	0.318	0	68	1859069	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB12
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:41:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	592638 ✓	2
	Be	9	-0.001	ug/L	0.001	169	9	7	28
	C	13		ug/L			57054	57924	3
	Cl	37		ug/L			3021538	3004230	5
>	Sc	45		ug/L			603049	610150 ✓	1
	V	51	0.021	ug/L	0.008	40	5204	5531	0
	V-1	51	-0.008	ug/L	0.001	6	161	63	11
	Cr	52	0.064	ug/L	0.032	49	15338	16221	0
	Cr	53	-0.030	ug/L	0.004	13	120	84	5
	Mn	55	-0.022	ug/L	0.002	7	851	520	3
	Co	59	0.000	ug/L	0.001	4578	76	77	9
>	Ge	72		ug/L			436831	437954 ✓	0
	Ni	60	0.002	ug/L	0.001	82	19	24	16
	Ni	62	-0.017	ug/L	0.005	29	34	28	6
	Cu	63	0.002	ug/L	0.002	163	79	89	17
	Cu	65	0.002	ug/L	0.003	185	33	37	20
	Zn	66	0.016	ug/L	0.006	34	137	162	5
	Zn	67	0.003	ug/L	0.022	642	26	27	21
	Zn	68	0.019	ug/L	0.014	75	127	148	10
	As	75	-0.003	ug/L	0.020	592	255	251	10
	As-1	75	0.212	ug/L	0.091	43	8509	8844	0
	Se	82	-0.057	ug/L	0.064	111	6	-3	337
	Se	78	0.738	ug/L	0.324	43	8644	8967	0
	Mo	98	0.006	ug/L	0.001	24	14	38	15
	Y	89		ug/L			278872	285394	2
	Kr	83		ug/L			509	520	3
>	In	115		ug/L			878990	829858 ✓	4
	Ag	107	0.000	ug/L	0.001	197	24	28	40
	Cd	111	-0.001	ug/L	0.001	173	66	60	11
	Cd	114	-0.000	ug/L	0.001	5476	45	42	18
	Sb	121	0.041	ug/L	0.008	19	270	781	11
	Sb	123	0.039	ug/L	0.004	11	194	568	6
	Ba	135	0.007	ug/L	0.001	8	45	66	7
	Ba	137	0.004	ug/L	0.000	12	76	96	6
>	Tb	159		ug/L			958896	894991 ✓	1
	Tl	205	-0.004	ug/L	0.001	21	228	108	20
	Pb	208	0.004	ug/L	0.001	14	272	384	5
	Bi	209		ug/L			2065247	1885039	2
	Th	232	0.078	ug/L	0.002	2	1210	3653	2
	U	238	0.000	ug/L	0.000	87	68	70	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 MB1 REN
Sample Dil Factor: 2
Comments: rr Ag
Sample Date/Time: Thursday, November 15, 2012 22:45:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	611994	1
	Be	9	0.005	ug/L	0.001	24	9	19	13
	C	13		ug/L			57054	65572	2
	Cl	37		ug/L			3021538	2994425	1
>	Sc	45		ug/L			603049	641695	0
	V	51	0.016	ug/L	0.004	24	5204	5754	1
	V-1	51	-0.000	ug/L	0.000	1282	161	171	1
	Cr	52	0.040	ug/L	0.007	16	15338	16788	1
	Cr	53	-0.012	ug/L	0.016	128	120	111	18
	Mn	55	0.081	ug/L	0.005	6	851	2203	3
	Co	59	0.003	ug/L	0.000	18	76	113	4
>	Ge	72		ug/L			436831	455701	1
	Ni	60	0.009	ug/L	0.002	21	19	46	10
	Ni	62	0.006	ug/L	0.009	139	34	38	10
	Cu	63	0.119	ug/L	0.007	6	79	818	3
	Cu	65	0.118	ug/L	0.006	4	33	364	4
	Zn	66	0.537	ug/L	0.012	2	137	1028	1
	Zn	67	0.445	ug/L	0.088	19	26	147	15
	Zn	68	0.487	ug/L	0.026	5	127	711	2
	As	75	0.000	ug/L	0.003	12644	255	266	3
	As-1	75	0.127	ug/L	0.073	57	8509	9071	0
	Se	82	-0.018	ug/L	0.028	149	6	3	136
	Se	78	0.403	ug/L	0.280	69	8644	9187	0
	Mo	98	0.006	ug/L	0.000	6	14	41	5
	Y	89		ug/L			278872	302235	1
	Kr	83		ug/L			509	512	1
>	In	115		ug/L			878990	862225	0
	Ag	107	0.003	ug/L	0.001	21	24	54	12
	Cd	111	0.001	ug/L	0.001	119	66	69	6
	Cd	114	0.002	ug/L	0.002	96	45	61	27
	Sb	121	0.003	ug/L	0.001	35	270	308	4
	Sb	123	0.007	ug/L	0.003	41	194	257	10
	Ba	135	0.011	ug/L	0.001	9	45	86	4
	Ba	137	0.011	ug/L	0.001	8	76	145	4
>	Tb	159		ug/L			958896	932950	0
	Tl	205	0.011	ug/L	0.005	44	228	506	25
	Pb	208	0.014	ug/L	0.000	3	272	756	1
	Bi	209		ug/L			2065247	1937559	0
	Th	232	0.073	ug/L	0.018	24	1210	3648	16
	U	238	0.001	ug/L	0.000	20	68	91	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:49:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	623434	1
	Be	9	26.089	ug/L	0.587	2	9	50404	2
	C	13		ug/L			57054	63785	4
	Cl	37		ug/L			3021538	3122871	1
>	Sc	45		ug/L			603049	656479	0
	V	51	24.344	ug/L	0.137	0	5204	339479	0
	V-1	51	24.578	ug/L	0.157	0	161	336952	0
	Cr	52	24.340	ug/L	0.364	1	15338	305965	1
	Cr	53	25.107	ug/L	0.581	2	120	33766	1
	Mn	55	24.641	ug/L	0.237	0	851	404728	0
	Co	59	24.686	ug/L	0.196	0	76	314121	0
>	Ge	72		ug/L			436831	465723	1
	Ni	60	24.036	ug/L	0.426	1	19	67845	1
	Ni	62	24.370	ug/L	0.167	0	34	9703	0
	Cu	63	25.209	ug/L	0.425	1	79	159804	0
	Cu	65	25.666	ug/L	0.420	1	33	73514	0
	Zn	66	74.430	ug/L	2.389	3	137	125678	1
	Zn	67	71.809	ug/L	1.645	2	26	19778	3
	Zn	68	73.746	ug/L	0.896	1	127	89623	0
	As	75	23.538	ug/L	0.284	1	255	37289	0
	As-1	75	23.491	ug/L	0.393	1	8509	45981	1
	Se	82	73.343	ug/L	0.777	1	6	12565	0
	Se	78	73.221	ug/L	0.969	1	8644	40980	1
	Mo	98	21.289	ug/L	0.149	0	14	96248	0
	Y	89		ug/L			278872	302692	1
	Kr	83		ug/L			509	513	3
>	In	115		ug/L			878990	863277	0
	Ag	107	18.866	ug/L	0.321	1	24	227170	1
	Cd	111	23.657	ug/L	0.283	1	66	99466	1
	Cd	114	23.670	ug/L	0.215	0	45	247385	1
	Sb	121	24.420	ug/L	0.375	1	270	326026	1
	Sb	123	24.087	ug/L	0.236	0	194	246441	0
	Ba	135	25.110	ug/L	0.318	1	45	94025	0
	Ba	137	25.125	ug/L	0.406	1	76	162467	1
>	Tb	159		ug/L			958896	964085	0
	Tl	205	25.459	ug/L	0.439	1	228	707749	1
	Pb	208	24.968	ug/L	0.272	1	272	915741	0
	Bi	209		ug/L			2065247	1942235	0
	Th	232	25.469	ug/L	0.141	0	1210	891924	0
	U	238	25.870	ug/L	0.116	0	68	920326	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:53:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Mn, Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	586780	0
[	Be	9	0.077	ug/L	0.005	6	9	148	6
	C	13		ug/L			57054	65283	0
	Cl	37		ug/L			3021538	3509413	0
[>	Sc	45		ug/L			603049	625359	3
[	V	51	7.532	ug/L	0.264	3	5204	103717	0
[	V-1	51	7.769	ug/L	0.193	2	161	101523	1
[	Cr	52	21.827	ug/L	0.418	1	15338	262958	2
[	Cr	53	22.634	ug/L	0.298	1	120	29012	3
[	Mn	55	645.770	ug/L	10.330	1	851	10078433	1
[	Co	59	3.603	ug/L	0.095	2	76	43714	0
[>	Ge	72		ug/L			436831	429782	2
[	Ni	60	18.791	ug/L	0.412	2	19	48940	1
[	Ni	62	29.137	ug/L	4.268	14	34	10669	11
[	Cu	63	100.492	ug/L	2.968	2	79	587489	2
[	Cu	65	101.064	ug/L	0.652	0	33	267043	2
[	Zn	66	1515.712	ug/L	28.037	1	137	2359318	1
[	Zn	67	1353.187	ug/L	32.423	2	26	343236	0
[	Zn	68	1435.497	ug/L	19.215	1	127	1607461	2
[	As	75	1.921	ug/L	0.015	0	255	3039	2
[	As-1	75	2.167	ug/L	0.148	6	8509	11510	1
[	Se	82	0.388	ug/L	0.097	24	6	67	22
[	Se	78	1.302	ug/L	0.543	41	8644	9022	1
[	Mo	98	8.453	ug/L	0.335	3	14	35253	1
	Y	89		ug/L			278872	325328	1
	Kr	83		ug/L			509	517	7
[>	In	115		ug/L			878990	847655	0
[	Ag	107	0.012	ug/L	0.001	5	24	165	4
[	Cd	111	4.124	ug/L	0.025	0	66	17078	0
[	Cd	114	4.043	ug/L	0.085	2	45	41528	1
[	Sb	121	3.360	ug/L	0.029	0	270	44277	0
[	Sb	123	3.332	ug/L	0.046	1	194	33633	1
[	Ba	135	127.034	ug/L	1.169	0	45	466919	0
[	Ba	137	125.977	ug/L	0.418	0	76	799621	0
[>	Tb	159		ug/L			958896	1013706	0
[	Tl	205	0.024	ug/L	0.003	11	228	939	8
[	Pb	208	243.248	ug/L	1.388	0	272	9378642	1
[	Bi	209		ug/L			2065247	1837391	0
[	Th	232	0.384	ug/L	0.118	30	1210	15388	27
[	U	238	0.205	ug/L	0.004	1	68	7721	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 22:57:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	585725	0
	Be	9	0.037	ug/L	0.001	1	9	76	1
	C	13		ug/L			57054	62250	4
	Cl	37		ug/L			3021538	3077354	2
>	Sc	45		ug/L			603049	623014	1
	V	51	0.220	ug/L	0.008	3	5204	8244	3
	V-1	51	0.255	ug/L	0.005	2	161	3481	0
	Cr	52	0.129	ug/L	0.021	16	15338	17300	3
	Cr	53	0.242	ug/L	0.028	11	120	431	7
	Mn	55	0.461	ug/L	0.032	6	851	8044	4
	Co	59	0.015	ug/L	0.001	6	76	260	2
>	Ge	72		ug/L			436831	445851	1
	Ni	60	0.079	ug/L	0.007	8	19	234	6
	Ni	62	0.271	ug/L	0.207	76	34	137	55
	Cu	63	2.183	ug/L	0.074	3	79	13317	1
	Cu	65	2.175	ug/L	0.078	3	33	5993	2
	Zn	66	0.727	ug/L	0.052	7	137	1313	5
	Zn	67	1.095	ug/L	0.071	6	26	315	5
	Zn	68	1.474	ug/L	0.016	1	127	1842	0
	As	75	0.095	ug/L	0.027	28	255	404	8
	As-1	75	0.095	ug/L	0.086	90	8509	8827	0
	Se	82	0.006	ug/L	0.064	1124	6	7	142
	Se	78	-0.021	ug/L	0.272	1286	8644	8813	0
	Mo	98	0.134	ug/L	0.009	6	14	591	5
	Y	89		ug/L			278872	291907	2
	Kr	83		ug/L			509	506	2
>	In	115		ug/L			878990	877731	1
	Ag	107	0.017	ug/L	0.001	6	24	235	5
	Cd	111	0.005	ug/L	0.004	82	66	87	20
	Cd	114	0.001	ug/L	0.000	13	45	56	1
	Sb	121	0.118	ug/L	0.001	1	270	1871	1
	Sb	123	0.122	ug/L	0.002	1	194	1458	2
	Ba	135	7.847	ug/L	0.069	0	45	29906	0
	Ba	137	7.733	ug/L	0.079	1	76	50890	0
>	Tb	159		ug/L			958896	950555	2
	Tl	205	-0.004	ug/L	0.001	21	228	122	16
	Pb	208	0.109	ug/L	0.007	6	272	4199	4
	Bi	209		ug/L			2065247	1978317	0
	Th	232	-0.005	ug/L	0.003	58	1210	1018	12
	U	238	0.010	ug/L	0.000	1	68	416	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:01:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag, Mn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	616838	0
[	Be	9	0.019	ug/L	0.004	21	9	44	16
	C	13		ug/L			57054	72339	4
	Cl	37		ug/L			3021538	3567263	1
[>	Sc	45		ug/L			603049	622158	0
[	V	51	0.065	ug/L	0.012	19	5204	6215	2
[	V-1	51	0.196	ug/L	0.009	4	161	2713	4
[	Cr	52	~ 0.156	ug/L	0.019	12	15338	17585	1
[	Cr	53	0.585	ug/L	0.070	12	120	867	10
[	Mn	55	349.974	ug/L	3.300	0	851	5436273	1
[	Co	59	0.339	ug/L	0.003	0	76	4162	0
[>	Ge	72		ug/L			436831	423189	2
[	Ni	60	3.756	ug/L	0.148	3	19	9648	3
[	Ni	62	5.117	ug/L	0.384	7	34	1876	6
[	Cu	63	3.684	ug/L	0.079	2	79	21286	0
[	Cu	65	2.567	ug/L	0.058	2	33	6707	0
[	Zn	66	33.760	ug/L	0.770	2	137	51883	2
[	Zn	67	33.916	ug/L	0.388	1	26	8500	2
[	Zn	68	34.945	ug/L	0.524	1	127	38657	2
[	As	75	0.368	ug/L	0.017	4	255	774	5
[	As-1	75	0.532	ug/L	0.107	20	8509	9002	1
[	Se	82	0.362	ug/L	0.034	9	6	62	9
[	Se	78	1.015	ug/L	0.441	43	8644	8772	1
[	Mo	98	21.214	ug/L	0.277	1	14	87155	2
	Y	89		ug/L			278872	282715	2
	Kr	83		ug/L			509	524	2
[>	In	115		ug/L			878990	855881	1
[	Ag	107	0.002	ug/L	0.000	15	24	45	8
[	Cd	111	0.285	ug/L	0.006	2	66	1252	2
[	Cd	114	0.287	ug/L	0.005	1	45	3015	0
[	Sb	121	2.726	ug/L	0.047	1	270	36305	0
[	Sb	123	2.737	ug/L	0.045	1	194	27930	0
[	Ba	135	46.128	ug/L	1.036	2	45	171190	0
[	Ba	137	44.794	ug/L	0.403	0	76	287120	1
[>	Tb	159		ug/L			958896	985940	0
[	Tl	205	0.005	ug/L	0.001	26	228	388	10
[	Pb	208	~0.073	ug/L	0.001	1	272	3008	0
[	Bi	209		ug/L			2065247	1878588	1
[	Th	232	0.008	ug/L	0.002	23	1210	1528	4
[	U	238	0.076	ug/L	0.002	3	68	2826	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:05:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	608021	1
	Be	9	-0.001	ug/L	0.002	120	9	6	48
	C	13		ug/L			57054	62859	0
	Cl	37		ug/L			3021538	3125827	0
>	Sc	45		ug/L			603049	625981	1
	V	51	0.204	ug/L	0.024	11	5204	8071	3
	V-1	51	0.240	ug/L	0.012	4	161	3295	3
	Cr	52	0.029	ug/L	0.045	159	15338	16241	2
	Cr	53	0.143	ug/L	0.011	7	120	308	3
	Mn	55	0.476	ug/L	0.014	2	851	8327	3
	Co	59	0.006	ug/L	0.001	21	76	146	8
>	Ge	72		ug/L			436831	438019	0
	Ni	60	0.093	ug/L	0.009	9	19	267	9
	Ni	62	0.078	ug/L	0.016	20	34	63	9
	Cu	63	2.375	ug/L	0.014	0	79	14232	0
	Cu	65	2.388	ug/L	0.037	1	33	6464	1
	Zn	66	1.708	ug/L	0.023	1	137	2846	1
	Zn	67	1.906	ug/L	0.106	5	26	519	5
	Zn	68	2.266	ug/L	0.014	0	127	2713	1
	As	75	0.094	ug/L	0.015	16	255	395	6
	As-1	75	0.201	ug/L	0.064	31	8509	8830	0
	Se	82	0.005	ug/L	0.113	2171	6	7	255
	Se	78	0.352	ug/L	0.283	80	8644	8811	1
	Mo	98	0.104	ug/L	0.002	1	14	456	1
	Y	89		ug/L			278872	289092	1
	Kr	83		ug/L			509	490	4
>	In	115		ug/L			878990	875637	1
	Ag	107	0.007	ug/L	0.001	7	24	115	5
	Cd	111	0.001	ug/L	0.002	154	66	72	10
	Cd	114	0.001	ug/L	0.001	35	45	60	9
	Sb	121	0.116	ug/L	0.005	4	270	1838	2
	Sb	123	0.117	ug/L	0.002	2	194	1406	1
	Ba	135	6.756	ug/L	0.022	0	45	25694	1
	Ba	137	6.594	ug/L	0.151	2	76	43302	0
>	Tb	159		ug/L			958896	976349	1
	Tl	205	-0.004	ug/L	0.001	28	228	128	22
	Pb	208	0.043	ug/L	0.001	2	272	1857	1
	Bi	209		ug/L			2065247	2070849	3
	Th	232	-0.024	ug/L	0.002	8	1210	396	17
	U	238	0.009	ug/L	0.001	6	68	402	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:10:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	615216	0
	Be	9	0.022	ug/L	0.002	11	9	51	8
	C	13		ug/L			57054	61702	2
	Cl	37		ug/L			3021538	5775376	1
>	Sc	45		ug/L			603049	596414	1
	V	51	1.809	ug/L	0.066	3	5204	27681	3
	V-1	51	2.828	ug/L	0.038	1	161	35369	1
	Cr	52	0.507	ug/L	0.043	8	15338	20650	3
	Cr	53	3.840	ug/L	0.083	2	120	4792	1
	Mn	55	0.175	ug/L	0.008	4	851	3443	1
	Co	59	0.036	ug/L	0.002	6	76	486	3
>	Ge	72		ug/L			436831	415404	0
	Ni	60	0.286	ug/L	0.010	3	19	737	3
	Ni	62	1.725	ug/L	0.352	20	34	643	19
	Cu	63	5.586	ug/L	0.091	1	79	31645	1
	Cu	65	1.596	ug/L	0.017	1	33	4106	0
	Zn	66	1.132	ug/L	0.033	2	137	1833	1
	Zn	67	3.335	ug/L	0.041	1	26	843	1
	Zn	68	2.629	ug/L	0.092	3	127	2965	3
	As	75	0.473	ug/L	0.016	3	255	907	1
	As-1	75	0.689	ug/L	0.065	9	8509	9057	0
	Se	82	0.185	ug/L	0.057	30	6	34	25
	Se	78	0.980	ug/L	0.181	18	8644	8599	0
	Mo	98	10.564	ug/L	0.186	1	14	42609	1
	Y	89		ug/L			278872	272630	0
	Kr	83		ug/L			509	493	5
>	In	115		ug/L			878990	803455	1
	Ag	107	0.012	ug/L	0.001	5	24	156	6
	Cd	111	0.005	ug/L	0.004	98	66	79	24
	Cd	114	0.010	ug/L	0.001	10	45	138	9
	Sb	121	1.839	ug/L	0.025	1	270	23077	2
	Sb	123	1.840	ug/L	0.025	1	194	17682	1
	Ba	135	39.663	ug/L	0.398	1	45	138197	0
	Ba	137	38.646	ug/L	0.674	1	76	232504	0
>	Tb	159		ug/L			958896	952988	0
	Tl	205	-0.000	ug/L	0.001	519	228	219	16
	Pb	208	0.053	ug/L	0.001	1	272	2181	2
	Bi	209		ug/L			2065247	1737783	1
	Th	232	-0.017	ug/L	0.001	7	1210	611	6
	U	238	1.414	ug/L	0.014	0	68	49784	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR73 H REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:14:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	585123	2
	Be	9	-0.000	ug/L	0.001	785	9	8	18
	C	13		ug/L			57054	59870	1
	Cl	37		ug/L			3021538	6216691	4
>	Sc	45		ug/L			603049	575588	1
	V	51	1.262	ug/L	0.016	1	5204	20143	2
	V-1	51	2.343	ug/L	0.012	0	161	28300	1
	Cr	52	0.280	ug/L	0.046	16	15338	17554	2
	Cr	53	3.813	ug/L	0.123	3	120	4592	2
	Mn	55	0.156	ug/L	0.006	3	851	3052	2
	Co	59	0.035	ug/L	0.001	2	76	457	1
>	Ge	72		ug/L			436831	394819	1
	Ni	60	0.307	ug/L	0.013	4	19	751	4
	Ni	62	1.738	ug/L	0.241	13	34	615	12
	Cu	63	4.852	ug/L	0.125	2	79	26132	2
	Cu	65	0.319	ug/L	0.009	2	33	803	3
	Zn	66	1.057	ug/L	0.014	1	137	1635	0
	Zn	67	4.061	ug/L	0.119	2	26	970	2
	Zn	68	2.901	ug/L	0.069	2	127	3099	1
	As	75	0.338	ug/L	0.021	6	255	682	4
	As-1	75	0.768	ug/L	0.114	14	8509	8712	0
	Se	82	0.223	ug/L	0.050	22	6	38	20
	Se	78	1.842	ug/L	0.404	21	8644	8489	0
	Mo	98	13.308	ug/L	0.212	1	14	51018	2
	Y	89		ug/L			278872	270582	1
	Kr	83		ug/L			509	493	3
>	In	115		ug/L			878990	800785	0
	Ag	107	0.003	ug/L	0.001	27	24	60	17
	Cd	111	0.003	ug/L	0.005	166	66	72	26
	Cd	114	0.010	ug/L	0.001	7	45	140	4
	Sb	121	1.886	ug/L	0.052	2	270	23579	1
	Sb	123	1.877	ug/L	0.032	1	194	17972	1
	Ba	135	48.722	ug/L	0.542	1	45	169204	1
	Ba	137	47.820	ug/L	0.596	1	76	286773	0
>	Tb	159		ug/L			958896	959442	0
	Tl	205	-0.002	ug/L	0.001	25	228	162	10
	Pb	208	0.031	ug/L	0.001	3	272	1405	3
	Bi	209		ug/L			2065247	1730696	0
	Th	232	-0.021	ug/L	0.002	7	1210	490	11
	U	238	0.928	ug/L	0.010	1	68	32928	1

ICP-MS Quantitative Analysis - Summary Report

rr Ag, Pb, Zn

Sample ID: VR34 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:19:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	592484	3
[	Be	9	0.613	ug/L	0.014	2	9	1133	3
	C	13		ug/L			57054	84168	3
	Cl	37		ug/L			3021538	3165740	0
[>	Sc	45		ug/L			603049	635647	0
[	V	51	28.379	ug/L	0.375	1	5204	382273	1
[	V-1	51	28.662	ug/L	0.570	1	161	380438	1
[	Cr	52	40.229	ug/L	0.988	2	15338	479127	2
[	Cr	53	41.185	ug/L	0.498	1	120	53554	1
[	Mn	55	1281.055	ug/L	28.859	2	851	20327037	1
[	Co	59	11.666	ug/L	0.235	2	76	143771	1
[>	Ge	72		ug/L			436831	431751	1
[	Ni	60	27.190	ug/L	0.429	1	19	71153	1
[	Ni	62	29.083	ug/L	0.455	1	34	10727	0
[	Cu	63	33.833	ug/L	0.730	2	79	198819	1
[	Cu	65	34.684	ug/L	0.249	0	33	92096	1
[	Zn	66	474.807	ug/L	3.755	0	137	742733	1
[	Zn	67	467.078	ug/L	3.910	0	26	119084	1
[	Zn	68	484.938	ug/L	5.260	1	127	545677	0
[	As	75	25.558	ug/L	0.221	0	255	37515	0
[	As-1	75	25.501	ug/L	0.275	1	8509	45555	0
[	Se	82	0.212	ug/L	0.096	45	6	39	37
[	Se	78	0.174	ug/L	0.272	156	8644	8613	0
[	Mo	98	0.620	ug/L	0.016	2	14	2610	2
	Y	89		ug/L			278872	366869	0
	Kr	83		ug/L			509	632	5
[>	In	115		ug/L			878990	884398	1
[	Ag	107	0.281	ug/L	0.005	1	24	3491	3
[	Cd	111	10.586	ug/L	0.060	0	66	45634	1
[	Cd	114	10.817	ug/L	0.166	1	45	115824	0
[	Sb	121	0.217	ug/L	0.007	3	270	3230	2
[	Sb	123	0.219	ug/L	0.004	1	194	2490	3
[	Ba	135	348.390	ug/L	1.994	0	45	1335914	1
[	Ba	137	353.676	ug/L	8.081	2	76	2341418	0
[>	Tb	159		ug/L			958896	996333	0
[	Tl	205	0.423	ug/L	0.002	0	228	12381	0
[	Pb	208	510.760	ug/L	2.012	0	272	19354947	0
[	Bi	209		ug/L			2065247	1964501	0
[	Th	232	7.302	ug/L	0.011	0	1210	265181	0
[	U	238	0.656	ug/L	0.005	0	68	24186	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR34 L SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:23:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

rr Ag

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			617808	588467	1
[	Be	9	0.243	ug/L	0.014	5	9	451	5
	C	13		ug/L			57054	67719	2
	Cl	37		ug/L			3021538	3060461	1
[>	Sc	45		ug/L			603049	598019	0
[	V	51	12.876	ug/L	0.273	2	5204	165979	1
[	V-1	51	12.947	ug/L	0.282	2	161	161750	1
[	Cr	52	9.254	ug/L	0.102	1	15338	115384	0
[	Cr	53	9.479	ug/L	0.172	1	120	11686	0
[	Mn	55	175.007	ug/L	3.215	1	851	2613105	1
[	Co	59	2.586	ug/L	0.006	0	76	30044	1
[>	Ge	72		ug/L			436831	438163	0
[	Ni	60	7.379	ug/L	0.096	1	19	19613	1
[	Ni	62	8.189	ug/L	0.254	3	34	3090	2
[	Cu	63	7.766	ug/L	0.045	0	79	46383	0
[	Cu	65	7.889	ug/L	0.064	0	33	21284	0
[	Zn	66	94.204	ug/L	0.915	0	137	149663	0
[	Zn	67	89.980	ug/L	2.622	2	26	23305	3
[	Zn	68	92.572	ug/L	0.376	0	127	105824	0
[	As	75	5.923	ug/L	0.107	1	255	9020	1
[	As-1	75	5.936	ug/L	0.099	1	8509	17310	0
[	Se	82	0.093	ug/L	0.052	56	6	21	39
[	Se	78	0.097	ug/L	0.035	36	8644	8710	0
[	Mo	98	0.135	ug/L	0.008	5	14	586	5
	Y	89		ug/L			278872	336549	0
	Kr	83		ug/L			509	499	3
[>	In	115		ug/L			878990	853342	0
[	Ag	107	0.086	ug/L	0.001	0	24	1050	0
[	Cd	111	1.546	ug/L	0.023	1	66	6486	1
[	Cd	114	1.555	ug/L	0.022	1	45	16107	1
[	Sb	121	0.145	ug/L	0.003	2	270	2181	1
[	Sb	123	0.141	ug/L	0.015	10	194	1612	9
[	Ba	135	43.656	ug/L	0.658	1	45	161566	1
[	Ba	137	43.133	ug/L	0.190	0	76	275672	0
[>	Tb	159		ug/L			958896	967359	0
[	Tl	205	0.153	ug/L	0.005	3	228	4495	2
[	Pb	208	87.465	ug/L	0.919	1	272	3218092	0
[	Bi	209		ug/L			2065247	1963778	1
[	Th	232	5.215	ug/L	0.070	1	1210	184205	0
[	U	238	0.509	ug/L	0.014	2	68	18224	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV13
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:27:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	560530 ✓	1
	Be	9	54.130	ug/L	0.555	1	9	94013	0
	C	13		ug/L			57054	53658	1
	Cl	37		ug/L			3021538	3111168	1
>	Sc	45		ug/L			603049	570571 ✓	1
	V	51	51.339	ug/L	0.986	1	5204	616721	1
	V-1	51	51.936	ug/L	0.769	1	161	618609	0
	Cr	52	50.727	ug/L	0.643	1	15338	538466	1
	Cr	53	52.677	ug/L	1.218	2	120	61450	2
	Mn	55	53.199	ug/L	0.590	1	851	758516	1
	Co	59	52.568	ug/L	1.107	2	76	581192	1
>	Ge	72		ug/L			436831	431318 ✓	1
	Ni	60	48.715	ug/L	0.467	0	19	127333	0
	Ni	62	48.643	ug/L	1.222	2	34	17908	4
	Cu	63	49.235	ug/L	1.545	3	79	288939	1
	Cu	65	49.674	ug/L	1.201	2	33	131726	1
	Zn	66	49.583	ug/L	0.590	1	137	77597	0
	Zn	67	51.120	ug/L	0.810	1	26	13042	0
	Zn	68	49.714	ug/L	1.017	2	127	56004	2
	As	75	48.773	ug/L	0.594	1	255	71286	0
	As-1	75	49.201	ug/L	0.662	1	8509	79993	0
	Se	82	49.173	ug/L	0.556	1	6	7804	0
	Se	78	50.658	ug/L	0.891	1	8644	28887	0
	Mo	98	41.987	ug/L	0.552	1	14	175796	1
	Y	89		ug/L			278872	275661	0
	Kr	83		ug/L			509	492	2
>	In	115		ug/L			878990	819261 ✓	2
	Ag	107	36.553	ug/L	1.218	3	24	417489	1
	Cd	111	50.313	ug/L	1.256	2	66	200616	0
	Cd	114	50.107	ug/L	0.781	1	45	496835	0
	Sb	121	50.009	ug/L	1.298	2	270	633152	1
	Sb	123	49.510	ug/L	1.201	2	194	480377	0
	Ba	135	52.224	ug/L	1.670	3	45	185463	0
	Ba	137	51.443	ug/L	1.027	1	76	315544	0
>	Tb	159		ug/L			958896	951395 ✓	1
	Tl	205	51.252	ug/L	0.620	1	228	1405666	0
	Pb	208	50.258	ug/L	0.704	1	272	1818646	1
	Bi	209		ug/L			2065247	1895686	0
	Th	232	51.375	ug/L	0.476	0	1210	1774127	0
	U	238	52.781	ug/L	0.874	1	68	1852663	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB13
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, November 15, 2012 23:34:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111512b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			617808	537442 ✓	1
	Be	9	-0.003	ug/L	0.001	49	9	3	56
	C	13		ug/L			57054	52553	3
	Cl	37		ug/L			3021538	3016508	0
>	Sc	45		ug/L			603049	561712 ✓	2
	V	51	0.023	ug/L	0.020	88	5204	5112	3
	V-1	51	0.003	ug/L	0.004	115	161	189	22
	Cr	52	0.070	ug/L	0.054	76	15338	14996	1
	Cr	53	0.007	ug/L	0.015	219	120	120	13
	Mn	55	-0.028	ug/L	0.013	46	851	395	44
	Co	59	0.001	ug/L	0.003	205	76	86	34
>	Ge	72		ug/L			436831	419930 ✓	1
	Ni	60	0.001	ug/L	0.003	249	19	22	35
	Ni	62	0.035	ug/L	0.005	13	34	45	4
	Cu	63	0.001	ug/L	0.003	224	79	85	22
	Cu	65	0.003	ug/L	0.003	110	33	39	20
	Zn	66	0.007	ug/L	0.016	233	137	142	18
	Zn	67	0.010	ug/L	0.011	117	26	28	9
	Zn	68	0.012	ug/L	0.003	22	127	135	3
	As	75	-0.018	ug/L	0.011	61	255	219	5
	As-1	75	0.222	ug/L	0.105	47	8509	8493	0
	Se	82	-0.020	ug/L	0.052	259	6	2	283
	Se	78	0.813	ug/L	0.353	43	8644	8626	0
	Mo	98	0.009	ug/L	0.005	53	14	51	40
	Y	89		ug/L			278872	268853	1
	Kr	83		ug/L			509	472	1
>	In	115		ug/L			878990	790103 ✓	1
	Ag	107	0.001	ug/L	0.002	159	24	37	66
	Cd	111	0.001	ug/L	0.005	360	66	65	30
	Cd	114	0.001	ug/L	0.004	392	45	50	75
	Sb	121	0.041	ug/L	0.003	7	270	749	5
	Sb	123	0.045	ug/L	0.002	3	194	598	2
	Ba	135	0.001	ug/L	0.005	369	45	45	37
	Ba	137	0.004	ug/L	0.007	203	76	89	48
>	Tb	159		ug/L			958896	891775 ✓	0
	Tl	205	-0.002	ug/L	0.001	68	228	163	20
	Pb	208	0.002	ug/L	0.005	217	272	334	52
	Bi	209		ug/L			2065247	1877935	0
	Th	232	0.090	ug/L	0.004	4	1210	4039	3
	U	238	0.001	ug/L	0.001	139	68	97	47

cnd
PLG

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			2991-10
		1			2990-12
		2			2991-1
		3			↓ -2
		4			2992-6
		5			2991-3
		Rinse sample			
		ICV			2926-7
		ICB			
		CCV1			
		CCB1			
		Low check			
ZZ		ZZZZZZ			Sc high
		ICSAB			^{62}Ni high
		LR200			Ag, Mo high
		LR300			
		B1			
		B2			
		ICSA			
		B3			
		CCV2			Mo, Ag high
		CCB2			
		VR32 MB1	SWN	20	Be
		↓ MB1SPK	↓	↓ ✓	↓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 2 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR30 E	SWN	20	Be
		F	↓	↓	↓
		G			
		H			
		I			
		J			
		K			
		L			
		CCV3			
		CCB3			
		VR32 A-L	SWN	100	Be rr Ag
		A	↓	20	↓ ↓
		ADUP		↓	
		ASPK		↓	
		B			
		C			
		D		↓	
		E		100	V, Cr, Co
		F		20	Be; rr Ag
		G	↓	↓	↓ ↓
		CCV4			
		CCB4			
		VR33 MB1	SWN	20	Be; rr Ag
		↓ MB1SPK	↓	↓	↓ ↓

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJJ **Page:** 3 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VR32 1t	SWN	20	Be; rr Ag
		I	↓	↓	↓
		J			
		K		↓	↓
		L		100	Pb Zn ; rr V, Cr, Co
		L		20	Be; rr Ag
		VR33 B		↓	↓
		↓ C	↓		
		CCV5			Sc high
		CCB5			↓
		VR33 A-L	SWN	500 ✓	Pb Zn
		A		100 ✓	↓
		ADUP		↓	
		ASPK			
		C			↓ rr V, Cr, Co
		E		↓	Zn
		I		20	Be; rr Ag
		J		100	Pb Zn
		J		20	Be; rr Ag
		VR32 E	↓	↓	↓
		CCV6			Sc high, Co low
		CCB6			↓
		VR34 MB1	SWN	20	Be; rr Ag
		↓ MB1SPK	↓	L	↓

5077F
Nexion ICP-MS Sample Run Log

Version 001
1/3/2012

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 11.16.12 **Analyst:** MJT **Page:** 4 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID		Prep Code	Dilution	Comments
		VR33	K	SWN	100	Zn
		↓	K	↓	20	Be; rr Ag
		↓	L	↓	↓	↓
		VR34	B		100	Pb
		↓	B		20	Be; rr Ag
		↓	C		↓	↓
		↓	D		100	Pb Zn
		↓	D	↓	20	Be; rr Ag
		CCV7				Sc high; Co low
		CCB7				↓
		VR34	E	SWN	100	Pb Zn
		↓	E	↓	20	Be; rr Ag
		↓	H		100	Zn
		↓	H		20	Be; rr Ag
		↓	I		100	Pb Zn
		↓	I		20	Be; rr Ag
		↓	J		100	Pb Zn
		↓	J		20	Be; rr Ag
		↓	K	↓	100	Pb Zn
		VR73	A	REN	20	rr Mn (Zn)
		CCV8				Sc high; Mn, Co low
		CCB8				↓ End PKG
		Rinse				
		DI				

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11.16.12

MZ Nexion	Analyst MJ 11.19.12	Peer AL 11-20	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	—	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	—	
Standard deviations	✓	✓	
Curve fit	✓	—	
Calibration Verification:			
ICV/CCV	✓	—	see log
ICB/CCB	✓	✓	↓
Samples:			
RSD's & SD's	✓	✓	see log
Internal Standards	✓	—	↓
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	—	see log
Post Spikes/Serial Dilutions	✓	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	—	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	—	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	—	—	

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, November 16, 2012 11:38:53
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1285
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq. Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3189.9	3189.877	19.383	0.6	Standard
	Mg	24.0	31573.0	31573.041	443.254	1.4	Standard
	In	114.9	68795.9	68795.880	429.402	0.6	Standard
	Pb	208.0	30196.8	30196.814	219.529	0.7	Standard
	U	238.1	53059.5	53059.527	481.866	0.9	Standard
⌈	CeO	155.9	1437.3	0.021	0.000	2.3	Standard
| >	Ce	139.9	69221.8	69221.779	197.514	0.3	Standard
⌊	Ce++	70.0	733.0	0.011	0.000	1.4	Standard
	Bkgd	220.0	0.2	0.167	0.118	70.7	Standard

Current Conditions File Data

Current Value	Description
1.09	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

ɔtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:38:51 AM
ıd Time: 11/16/2012 11:41:27 AM

ıily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3189.88
Obtained Intensity (Mg 23.985): 31573.04
Obtained Intensity (In 114.904): 68795.88
Obtained Intensity (Pb 207.977): 30196.81
Obtained Intensity (U 238.05): 53059.53
Obtained Intensity (Bkgd 220): 0.17
Obtained Formula (CeO 155.9 / Ce 139.905): 0.021 (=1437.32 / 69221.78)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=733.03 / 69221.78)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:00:20 AM
nd Time: 11/16/2012 11:03:02 AM

ass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.711)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.702)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 11/16/2012 11:04:18 AM
nd Time: 11/16/2012 11:08:29 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.999; Intercept = -10.68

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:45:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				681751	0
	Be	9		ug/L				8	24
	C	13		ug/L				63994	1
	Cl	37		ug/L				3532807	0
>	Sc	45		ug/L				674505	2
	V	51		ug/L				6013	1
	V-1	51		ug/L				387	3
	Cr	52		ug/L				17778	2
	Cr	53		ug/L				210	7
	Mn	55		ug/L				314	2
	Co	59		ug/L				73	20
>	Ge	72		ug/L				426798	1
	Ni	60		ug/L				26	10
	Ni	62		ug/L				48	17
	Cu	63		ug/L				88	30
	Cu	65		ug/L				42	20
	Zn	66		ug/L				141	4
	Zn	67		ug/L				21	9
	Zn	68		ug/L				144	11
	As	75		ug/L				220	2
	As-1	75		ug/L				9153	0
	Se	82		ug/L				-1	888
	Se	78		ug/L				9315	0
	Mo	98		ug/L				35	11
	Y	89		ug/L				271155	0
	Kr	83		ug/L				529	5
>	In	115		ug/L				840042	0
	Ag	107		ug/L				32	23
	Cd	111		ug/L				72	14
	Cd	114		ug/L				44	20
	Sb	121		ug/L				346	17
	Sb	123		ug/L				257	13
	Ba	135		ug/L				17	24
	Ba	137		ug/L				19	9
>	Tb	159		ug/L				1001666	0
	Tl	205		ug/L				206	31
	Pb	208		ug/L				157	11
	Bi	209		ug/L				2293546	0
	Th	232		ug/L				1512	1
	U	238		ug/L				29	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:49:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	678848	1
[	Be	9	0.200	ug/L	0.006	2	8	505	1
	C	13		ug/L			63994	65432	1
	Cl	37		ug/L			3532807	3545982	3
[>	Sc	45		ug/L			674505	680274	0
[	V	51	0.200	ug/L	0.021	10	6013	8785	3
[	V-1	51	0.200	ug/L	0.003	1	387	3194	1
[	Cr	52	0.500	ug/L	0.037	7	17778	23649	2
[	Cr	53	0.500	ug/L	0.036	7	210	884	5
[	Mn	55	0.500	ug/L	0.007	1	314	8394	1
[	Co	59	0.200	ug/L	0.007	3	73	2642	3
[>	Ge	72		ug/L			426798	428590	0
[	Ni	60	0.500	ug/L	0.022	4	26	1458	3
[	Ni	62	0.500	ug/L	0.050	9	48	231	7
[	Cu	63	0.500	ug/L	0.013	2	88	3319	2
[	Cu	65	0.500	ug/L	0.008	1	42	1474	1
[	Zn	66	4.000	ug/L	0.038	0	141	6841	0
[	Zn	67	4.000	ug/L	0.194	4	21	1040	4
[	Zn	68	4.000	ug/L	0.111	2	144	4849	3
[	As	75	0.200	ug/L	0.007	3	220	539	1
[	As-1	75	0.200	ug/L	0.070	35	9153	9376	0
[	Se	82	0.500	ug/L	0.010	2	-1	87	2
[	Se	78	0.500	ug/L	0.258	51	9315	9443	0
[	Mo	98	0.200	ug/L	0.015	7	35	777	7
	Y	89		ug/L			271155	271780	1
	Kr	83		ug/L			529	523	1
[>	In	115		ug/L			840042	841036	0
[	Ag	107	0.200	ug/L	0.006	3	32	2472	2
[	Cd	111	0.100	ug/L	0.006	6	72	514	5
[	Cd	114	0.100	ug/L	0.004	4	44	1157	3
[	Sb	121	0.200	ug/L	0.004	1	346	2773	1
[	Sb	123	0.200	ug/L	0.005	2	257	2116	1
[	Ba	135	0.500	ug/L	0.016	3	17	1922	2
[	Ba	137	0.500	ug/L	0.003	0	19	3256	0
[>	Tb	159		ug/L			1001666	1004484	0
[	Tl	205	0.200	ug/L	0.004	1	206	6732	1
[	Pb	208	0.100	ug/L	0.002	1	157	4576	2
[	Bi	209		ug/L			2293546	2285482	0
[	Th	232	0.200	ug/L	0.007	3	1512	7425	3
[	U	238	0.200	ug/L	0.000	0	29	8335	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:54:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690004	1
	Be	9	10.000	ug/L	0.218	2	8	24663	0
	C	13		ug/L			63994	64386	2
	Cl	37		ug/L			3532807	3627720	2
>	Sc	45		ug/L			674505	693621	0
	V	51	10.000	ug/L	0.128	1	6013	140550	1
	V-1	51	10.000	ug/L	0.110	1	387	135671	0
	Cr	52	10.000	ug/L	0.094	0	17778	136788	1
	Cr	53	10.000	ug/L	0.185	1	210	13896	1
	Mn	55	10.000	ug/L	0.186	1	314	164566	1
	Co	59	10.000	ug/L	0.235	2	73	126725	1
>	Ge	72		ug/L			426798	436937	1
	Ni	60	9.999	ug/L	0.243	2	26	27972	3
	Ni	62	10.001	ug/L	0.238	2	48	4001	1
	Cu	63	9.999	ug/L	0.076	0	88	63348	0
	Cu	65	9.999	ug/L	0.123	1	42	28630	0
	Zn	66	9.982	ug/L	0.152	1	141	17000	1
	Zn	67	10.082	ug/L	0.082	0	21	2783	0
	Zn	68	10.020	ug/L	0.111	1	144	12319	2
	As	75	10.000	ug/L	0.134	1	220	15204	0
	As-1	75	10.001	ug/L	0.223	2	9153	24303	0
	Se	82	9.997	ug/L	0.250	2	-1	1656	1
	Se	78	10.014	ug/L	0.607	6	9315	13704	0
	Mo	98	10.000	ug/L	0.111	1	35	38569	1
	Y	89		ug/L			271155	275843	1
	Kr	83		ug/L			529	544	4
>	In	115		ug/L			840042	854316	0
	Ag	107	10.000	ug/L	0.211	2	32	116515	1
	Cd	111	10.000	ug/L	0.116	1	72	44007	1
	Cd	114	10.000	ug/L	0.068	0	44	108341	0
	Sb	121	10.000	ug/L	0.047	0	346	131416	0
	Sb	123	10.000	ug/L	0.084	0	257	100706	0
	Ba	135	9.999	ug/L	0.076	0	17	37726	0
	Ba	137	10.000	ug/L	0.123	1	19	65463	1
>	Tb	159		ug/L			1001666	1032266	0
	Tl	205	10.000	ug/L	0.109	1	206	316714	1
	Pb	208	10.000	ug/L	0.053	0	157	416417	0
	Bi	209		ug/L			2293546	2310164	0
	Th	232	10.001	ug/L	0.104	1	1512	373350	0
	U	238	10.000	ug/L	0.196	1	29	410875	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 14:58:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	698058	0
	Be	9	19.939	ug/L	0.303	1	8	49153	1
	C	13		ug/L			63994	63964	2
	Cl	37		ug/L			3532807	3597639	2
>	Sc	45		ug/L			674505	700457	1
	V	51	20.040	ug/L	0.645	3	6013	280327	3
	V-1	51	20.030	ug/L	0.714	3	387	275688	3
	Cr	52	19.982	ug/L	0.255	1	17778	256694	1
	Cr	53	19.952	ug/L	0.175	0	210	27523	0
	Mn	55	19.941	ug/L	0.295	1	314	327267	2
	Co	59	19.906	ug/L	0.351	1	73	250003	0
>	Ge	72		ug/L			426798	434992	0
	Ni	60	19.853	ug/L	0.104	0	26	53689	1
	Ni	62	19.969	ug/L	0.298	1	48	7857	1
	Cu	63	20.002	ug/L	0.387	1	88	126105	1
	Cu	65	20.025	ug/L	0.383	1	42	57316	1
	Zn	66	19.910	ug/L	0.244	1	141	33099	0
	Zn	67	20.070	ug/L	0.530	2	21	5560	2
	Zn	68	19.906	ug/L	0.272	1	144	23832	0
	As	75	19.990	ug/L	0.017	0	220	29980	0
	As-1	75	20.000	ug/L	0.021	0	9153	39065	0
	Se	82	19.974	ug/L	0.346	1	-1	3279	1
	Se	78	20.016	ug/L	0.207	1	9315	17816	0
	Mo	98	20.020	ug/L	0.203	1	35	77142	0
	Y	89		ug/L			271155	277399	0
	Kr	83		ug/L			529	550	5
>	In	115		ug/L			840042	848651	2
	Ag	107	20.042	ug/L	0.625	3	32	233848	2
	Cd	111	19.950	ug/L	0.396	1	72	86245	0
	Cd	114	19.942	ug/L	0.353	1	44	212106	1
	Sb	121	20.006	ug/L	0.450	2	346	261036	0
	Sb	123	19.982	ug/L	0.463	2	257	198873	0
	Ba	135	20.031	ug/L	0.302	1	17	75514	0
	Ba	137	20.028	ug/L	0.375	1	19	130917	0
>	Tb	159		ug/L			1001666	1019517	1
	Tl	205	20.014	ug/L	0.262	1	206	627640	1
	Pb	208	19.999	ug/L	0.296	1	157	822129	0
	Bi	209		ug/L			2293546	2269096	0
	Th	232	20.089	ug/L	0.319	1	1512	752562	0
	U	238	19.998	ug/L	0.323	1	29	811192	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:03:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	689998	1
[	Be	9	49.998	ug/L	0.961	1	8	121778	1
	C	13		ug/L			63994	64041	1
	Cl	37		ug/L			3532807	3745894	1
[>	Sc	45		ug/L			674505	693960	0
[	V	51	49.986	ug/L	1.203	2	6013	682651	2
[	V-1	51	49.965	ug/L	0.712	1	387	678427	1
[	Cr	52	49.987	ug/L	0.103	0	17778	608024	0
[	Cr	53	49.919	ug/L	1.695	3	210	67355	3
[	Mn	55	50.101	ug/L	1.217	2	314	822363	2
[	Co	59	50.046	ug/L	0.343	0	73	625531	0
[>	Ge	72		ug/L			426798	430617	0
[	Ni	60	50.060	ug/L	2.045	4	26	134751	3
[	Ni	62	49.968	ug/L	0.902	1	48	19326	1
[	Cu	63	49.841	ug/L	0.494	0	88	306080	0
[	Cu	65	49.832	ug/L	1.118	2	42	138811	2
[	Zn	66	49.889	ug/L	0.959	1	141	81025	1
[	Zn	67	49.847	ug/L	0.368	0	21	13442	0
[	Zn	68	49.849	ug/L	1.244	2	144	58013	2
[	As	75	49.977	ug/L	0.844	1	220	73688	1
[	As-1	75	49.982	ug/L	0.781	1	9153	82661	1
[	Se	82	49.897	ug/L	0.564	1	-1	8029	0
[	Se	78	49.914	ug/L	0.641	1	9315	29769	0
[	Mo	98	49.990	ug/L	0.682	1	35	190442	0
	Y	89		ug/L			271155	273448	1
	Kr	83		ug/L			529	549	7
[>	In	115		ug/L			840042	823819	0
[	Ag	107	49.775	ug/L	1.011	2	32	551472	1
[	Cd	111	50.015	ug/L	0.224	0	72	210156	0
[	Cd	114	50.070	ug/L	0.284	0	44	520620	0
[	Sb	121	50.143	ug/L	0.183	0	346	643993	0
[	Sb	123	50.076	ug/L	0.188	0	257	487265	0
[	Ba	135	50.167	ug/L	0.125	0	17	186719	0
[	Ba	137	50.132	ug/L	0.216	0	19	322401	0
[>	Tb	159		ug/L			1001666	1004937	0
[	Tl	205	49.952	ug/L	0.667	1	206	1536310	0
[	Pb	208	49.980	ug/L	0.557	1	157	2021099	0
[	Bi	209		ug/L			2293546	2197296	0
[	Th	232	50.210	ug/L	0.647	1	1512	1891500	0
[	U	238	50.469	ug/L	0.511	1	29	2117328	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:09:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	668251	1
[	Be	9	99.918	ug/L	1.781	1	8	235086	2
	C	13		ug/L			63994	64099	3
	Cl	37		ug/L			3532807	3711465	0
[>	Sc	45		ug/L			674505	677060	1
[	V	51	100.456	ug/L	1.993	1	6013	1352528	0
[	V-1	51	100.617	ug/L	1.806	1	387	1360181	0
[	Cr	52	100.191	ug/L	2.506	2	17778	1178123	0
[	Cr	53	100.716	ug/L	2.527	2	210	135575	1
[	Mn	55	99.879	ug/L	1.927	1	314	1592528	0
[	Co	59	100.079	ug/L	1.965	1	73	1223369	1
[>	Ge	72		ug/L			426798	422829	2
[	Ni	60	99.908	ug/L	3.597	3	26	263133	1
[	Ni	62	99.696	ug/L	2.242	2	48	37425	0
[	Cu	63	99.436	ug/L	4.016	4	88	588131	2
[	Cu	65	99.133	ug/L	2.521	2	42	263400	0
[	Zn	66	99.077	ug/L	4.016	4	141	153081	1
[	Zn	67	99.572	ug/L	1.823	1	21	25975	2
[	Zn	68	99.395	ug/L	4.037	4	144	111148	1
[	As	75	99.721	ug/L	3.049	3	220	142770	0
[	As-1	75	99.837	ug/L	3.004	3	9153	152243	0
[	Se	82	99.780	ug/L	3.025	3	-1	15647	1
[	Se	78	100.209	ug/L	2.886	2	9315	49652	1
[	Mo	98	99.944	ug/L	2.718	2	35	372988	0
	Y	89		ug/L			271155	272249	0
	Kr	83		ug/L			529	597	2
[>	In	115		ug/L			840042	814550	0
[	Ag	107	99.079	ug/L	3.173	3	32	1053014	3
[	Cd	111	99.293	ug/L	0.142	0	72	402968	0
[	Cd	114	99.414	ug/L	1.144	1	44	1002463	1
[	Sb	121	99.528	ug/L	0.112	0	346	1243952	0
[	Sb	123	99.597	ug/L	0.827	0	257	945268	0
[	Ba	135	99.865	ug/L	1.141	1	17	365838	1
[	Ba	137	99.897	ug/L	0.104	0	19	633031	0
[>	Tb	159		ug/L			1001666	996124	0
[	Tl	205	100.694	ug/L	0.444	0	206	3142546	0
[	Pb	208	99.851	ug/L	0.952	0	157	3982796	1
[	Bi	209		ug/L			2293546	2133650	0
[	Th	232	100.783	ug/L	0.381	0	1512	3862786	0
[	U	238	99.667	ug/L	0.511	0	29	4099300	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:16:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662492	2
	Be	9	0.005	ug/L	0.005	118	8	19	64
	C	13		ug/L			63994	63519	1
	Cl	37		ug/L			3532807	3610386	2
>	Sc	45		ug/L			674505	676674	0
	V	51	0.019	ug/L	0.017	87	6013	6286	4
	V-1	51	-0.012	ug/L	0.010	79	387	228	57
	Cr	52	0.057	ug/L	0.043	75	17778	18493	3
	Cr	53	-0.043	ug/L	0.016	37	210	152	14
	Mn	55	0.005	ug/L	0.009	176	314	395	35
	Co	59	0.005	ug/L	0.006	127	73	129	55
>	Ge	72		ug/L			426798	420811	0
	Ni	60	0.004	ug/L	0.010	249	26	35	69
	Ni	62	0.144	ug/L	0.074	51	48	101	26
	Cu	63	0.013	ug/L	0.009	71	88	162	32
	Cu	65	0.001	ug/L	0.006	755	42	43	33
	Zn	66	-0.002	ug/L	0.008	465	141	137	8
	Zn	67	0.002	ug/L	0.005	196	21	21	5
	Zn	68	-0.007	ug/L	0.011	144	144	133	8
	As	75	0.006	ug/L	0.008	132	220	226	4
	As-1	75	0.101	ug/L	0.092	91	9153	9168	0
	Se	82	-0.096	ug/L	0.015	15	-1	-16	14
	Se	78	0.314	ug/L	0.339	107	9315	9310	0
	Mo	98	0.011	ug/L	0.002	18	35	76	9
	Y	89		ug/L			271155	269348	1
	Kr	83		ug/L			529	559	2
>	In	115		ug/L			840042	811042	0
	Ag	107	0.003	ug/L	0.001	19	32	63	10
	Cd	111	0.002	ug/L	0.003	145	72	79	17
	Cd	114	0.000	ug/L	0.001	1167	44	44	27
	Sb	121	0.097	ug/L	0.014	14	346	1538	11
	Sb	123	0.096	ug/L	0.016	16	257	1150	12
	Ba	135	0.001	ug/L	0.000	29	17	21	7
	Ba	137	0.002	ug/L	0.001	28	19	31	12
>	Tb	159		ug/L			1001666	975555	0
	Tl	205	0.021	ug/L	0.014	64	206	855	50
	Pb	208	0.001	ug/L	0.000	52	157	178	7
	Bi	209		ug/L			2293546	2236453	0
	Th	232	0.141	ug/L	0.008	5	1512	6770	3
	U	238	0.003	ug/L	0.001	20	29	135	16

Sample Information

Sample Date/Time: Friday, November 16, 2012 15:16:05
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.004	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.020	0.20	10	20	50	100
V-1	51	**0.9999**	0.020	0.20	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.024	0.50	10	20	50	100
Co	59	**1.0000**	0.018	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9998**	0.013	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.012	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**0.9999**	0.038	0.20	10	20	50	100
U	238	**0.9999**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:22:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690403	1
	Be	9	49.894	ug/L	0.683	1	8	121266	0
	C	13		ug/L			63994	67900	1
	Cl	37		ug/L			3532807	3629687	1
>	Sc	45		ug/L			674505	703247	3
	V	51	50.500	ug/L	1.863	3	6013	708946	0
	V-1	51	49.902	ug/L	1.813	3	387	700498	0
	Cr	52	50.060	ug/L	2.314	4	17778	620285	1
	Cr	53	48.148	ug/L	2.038	4	210	67390	1
	Mn	55	49.794	ug/L	1.291	2	314	824536	0
	Co	59	48.896	ug/L	2.188	4	73	620443	2
>	Ge	72		ug/L			426798	430337	2
	Ni	60	50.592	ug/L	1.016	2	26	135669	1
	Ni	62	51.298	ug/L	2.083	4	48	19620	2
	Cu	63	52.276	ug/L	1.815	3	88	314756	1
	Cu	65	51.776	ug/L	1.199	2	42	140046	0
	Zn	66	50.777	ug/L	1.532	3	141	79933	0
	Zn	67	50.427	ug/L	2.276	4	21	13396	4
	Zn	68	49.844	ug/L	1.986	3	144	56807	2
	As	75	50.549	ug/L	1.471	2	220	73772	1
	As-1	75	50.988	ug/L	1.471	2	9153	83651	0
	Se	82	78.668	ug/L	2.053	2	-1	12555	0
	Se	78	79.902	ug/L	2.563	3	9315	42195	0
	Mo	98	49.610	ug/L	1.562	3	35	188439	1
	Y	89		ug/L			271155	275646	0
	Kr	83		ug/L			529	583	3
>	In	115		ug/L			840042	834912	0
	Ag	107	51.441	ug/L	1.082	2	32	560341	1
	Cd	111	49.654	ug/L	0.553	1	72	206580	1
	Cd	114	49.377	ug/L	0.518	1	44	510376	1
	Sb	121	49.211	ug/L	0.599	1	346	630579	0
	Sb	123	48.980	ug/L	0.378	0	257	476612	0
	Ba	135	50.077	ug/L	0.916	1	17	188036	1
	Ba	137	50.168	ug/L	0.843	1	19	325859	1
>	Tb	159		ug/L			1001666	1011851	0
	Tl	205	49.611	ug/L	0.837	1	206	1572690	0
	Pb	208	50.170	ug/L	0.451	0	157	2032668	0
	Bi	209		ug/L			2293546	2203007	0
	Th	232	49.919	ug/L	0.372	0	1512	1944213	0
	U	238	52.546	ug/L	0.603	1	29	2195230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:29:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	684262	1
	Be	9	0.000	ug/L	0.002	1684	8	9	55
	C	13		ug/L			63994	62226	3
	Cl	37		ug/L			3532807	3528326	2
>	Sc	45		ug/L			674505	687249	1
	V	51	-0.005	ug/L	0.002	38	6013	6055	0
	V-1	51	-0.019	ug/L	0.001	5	387	139	9
	Cr	52	-0.022	ug/L	0.017	77	17778	17851	0
	Cr	53	-0.065	ug/L	0.016	24	210	125	16
	Mn	55	-0.001	ug/L	0.001	75	314	296	5
	Co	59	0.000	ug/L	0.000	161	73	76	5
>	Ge	72		ug/L			426798	425988	1
	Ni	60	-0.002	ug/L	0.003	129	26	20	32
	Ni	62	0.011	ug/L	0.031	285	48	52	22
	Cu	63	-0.000	ug/L	0.000	576	88	87	2
	Cu	65	-0.005	ug/L	0.002	50	42	29	20
	Zn	66	0.001	ug/L	0.002	149	141	143	2
	Zn	67	0.005	ug/L	0.003	58	21	22	2
	Zn	68	-0.019	ug/L	0.005	27	144	122	4
	As	75	0.034	ug/L	0.030	87	220	269	14
	As-1	75	0.066	ug/L	0.114	173	9153	9229	0
	Se	82	0.067	ug/L	0.096	142	-1	8	173
	Se	78	0.217	ug/L	0.404	185	9315	9384	0
	Mo	98	0.004	ug/L	0.003	84	35	49	21
	Y	89		ug/L			271155	270459	1
	Kr	83		ug/L			529	548	0
>	In	115		ug/L			840042	812126	0
	Ag	107	0.000	ug/L	0.001	11553	32	31	24
	Cd	111	0.001	ug/L	0.001	102	72	76	7
	Cd	114	0.000	ug/L	0.001	252	44	45	13
	Sb	121	0.019	ug/L	0.009	47	346	567	19
	Sb	123	0.019	ug/L	0.008	42	257	432	18
	Ba	135	-0.001	ug/L	0.002	189	17	13	42
	Ba	137	0.001	ug/L	0.001	151	19	23	32
>	Tb	159		ug/L			1001666	982567	0
	Tl	205	0.005	ug/L	0.005	112	206	346	47
	Pb	208	0.000	ug/L	0.000	193	157	159	4
	Bi	209		ug/L			2293546	2275284	0
	Th	232	0.066	ug/L	0.002	2	1512	3977	0
	U	238	0.001	ug/L	0.000	2	29	74	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:33:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683933	1
	Be	9	50.034	ug/L	0.841	1	8	120468	0
	C	13		ug/L			63994	66070	2
	Cl	37		ug/L			3532807	3775307	3
>	Sc	45		ug/L			674505	684426	1
	V	51	49.338	ug/L	1.329	2	6013	674609	1
	V-1	51	49.295	ug/L	1.561	3	387	673794	1
	Cr	52	49.891	ug/L	1.454	2	17778	602168	2
	Cr	53	49.736	ug/L	2.482	4	210	67784	4
	Mn	55	50.137	ug/L	1.332	2	314	808256	1
	Co	59	49.406	ug/L	0.759	1	73	610603	0
>	Ge	72		ug/L			426798	429799	2
	Ni	60	51.006	ug/L	0.994	1	26	136605	0
	Ni	62	50.622	ug/L	0.675	1	48	19349	3
	Cu	63	51.236	ug/L	1.610	3	88	308117	1
	Cu	65	51.013	ug/L	0.746	1	42	137848	2
	Zn	66	50.452	ug/L	1.096	2	141	79337	1
	Zn	67	50.153	ug/L	1.547	3	21	13305	1
	Zn	68	50.940	ug/L	1.570	3	144	58000	3
	As	75	50.901	ug/L	0.685	1	220	74206	0
	As-1	75	50.873	ug/L	0.866	1	9153	83393	0
	Se	82	50.956	ug/L	0.554	1	-1	8123	1
	Se	78	50.854	ug/L	1.354	2	9315	30234	0
	Mo	98	49.832	ug/L	1.144	2	35	189075	0
	Y	89		ug/L			271155	270557	1
	Kr	83		ug/L			529	565	2
>	In	115		ug/L			840042	822244	0
	Ag	107	48.502	ug/L	0.393	0	32	520362	0
	Cd	111	50.122	ug/L	0.655	1	72	205374	1
	Cd	114	50.866	ug/L	0.327	0	44	517780	0
	Sb	121	49.723	ug/L	0.297	0	346	627496	0
	Sb	123	50.142	ug/L	0.288	0	257	480514	0
	Ba	135	50.075	ug/L	0.722	1	17	185178	1
	Ba	137	49.887	ug/L	0.147	0	19	319117	0
>	Tb	159		ug/L			1001666	1007905	0
	Tl	205	48.340	ug/L	0.187	0	206	1526563	0
	Pb	208	49.413	ug/L	0.607	1	157	1994242	0
	Bi	209		ug/L			2293546	2190001	1
	Th	232	47.934	ug/L	0.611	1	1512	1859687	0
	U	238	48.673	ug/L	2.423	4	29	2025586	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:40:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	673285	2
	Be	9	0.001	ug/L	0.001	185	8	10	26
	C	13		ug/L			63994	63733	4
	Cl	37		ug/L			3532807	3619561	1
>	Sc	45		ug/L			674505	687411	1
	V	51	-0.024	ug/L	0.008	31	6013	5800	1
	V-1	51	-0.020	ug/L	0.000	2	387	127	5
	Cr	52	-0.078	ug/L	0.022	27	17778	17196	0
	Cr	53	-0.063	ug/L	0.007	10	210	128	7
	Mn	55	-0.001	ug/L	0.001	65	314	300	4
	Co	59	-0.000	ug/L	0.001	233	73	71	9
>	Ge	72		ug/L			426798	421158	0
	Ni	60	-0.002	ug/L	0.002	119	26	21	26
	Ni	62	0.032	ug/L	0.027	83	48	59	16
	Cu	63	-0.001	ug/L	0.002	172	88	81	11
	Cu	65	-0.005	ug/L	0.003	59	42	29	24
	Zn	66	-0.014	ug/L	0.002	12	141	119	2
	Zn	67	-0.010	ug/L	0.013	128	21	18	19
	Zn	68	-0.013	ug/L	0.007	54	144	128	5
	As	75	0.012	ug/L	0.010	81	220	234	5
	As-1	75	0.174	ug/L	0.094	54	9153	9280	1
	Se	82	-0.053	ug/L	0.063	120	-1	-10	98
	Se	78	0.598	ug/L	0.284	47	9315	9433	1
	Mo	98	0.008	ug/L	0.002	21	35	66	9
	Y	89		ug/L			271155	270665	0
	Kr	83		ug/L			529	561	3
>	In	115		ug/L			840042	820462	1
	Ag	107	0.000	ug/L	0.000	675	32	32	15
	Cd	111	0.001	ug/L	0.001	103	72	74	4
	Cd	114	-0.000	ug/L	0.001	124	44	38	15
	Sb	121	0.050	ug/L	0.007	13	346	964	9
	Sb	123	0.051	ug/L	0.011	22	257	734	14
	Ba	135	-0.002	ug/L	0.001	40	17	9	34
	Ba	137	0.001	ug/L	0.001	154	19	22	23
>	Tb	159		ug/L			1001666	981836	1
	Tl	205	0.008	ug/L	0.006	78	206	456	42
	Pb	208	0.000	ug/L	0.000	853	157	155	5
	Bi	209		ug/L			2293546	2243714	0
	Th	232	0.111	ug/L	0.011	9	1512	5693	8
	U	238	0.002	ug/L	0.000	17	29	89	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:44:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	700365 ✓	1
[	Be	9	0.200	ug/L	0.008	3	8	501	3
	C	13		ug/L			63994	63447	4
	Cl	37		ug/L			3532807	3523565	1
[>	Sc	45		ug/L			674505	688392	0
[	V	51	0.194	ug/L	0.020	10	6013	8773	2
[	V-1	51	0.187	ug/L	0.009	4	387	2959	3
[	Cr	52	0.469	ug/L	0.021	4	17778	23665	0
[	Cr	53	0.439	ug/L	0.035	7	210	815	6
[	Mn	55	0.499	ug/L	0.014	2	314	8414	2
[	Co	59	0.200	ug/L	0.003	1	73	2555	1
[>	Ge	72		ug/L			426798	429033 ✓	1
[	Ni	60	0.510	ug/L	0.011	2	26	1390	1
[	Ni	62	0.453	ug/L	0.069	15	48	221	12
[	Cu	63	0.528	ug/L	0.015	2	88	3258	3
[	Cu	65	0.532	ug/L	0.009	1	42	1476	2
[	Zn	66	4.322	ug/L	0.068	1	141	6915	0
[	Zn	67	3.960	ug/L	0.228	5	21	1068	5
[	Zn	68	4.216	ug/L	0.158	3	144	4923	1
[	As	75	0.225	ug/L	0.017	7	220	548	5
[	As-1	75	0.250	ug/L	0.055	22	9153	9564	0
[	Se	82	0.495	ug/L	0.048	9	-1	76	10
[	Se	78	0.600	ug/L	0.252	41	9315	9608	0
[	Mo	98	0.191	ug/L	0.004	2	35	757	0
	Y	89		ug/L			271155	266536 ✓	0
	Kr	83		ug/L			529	542	2
[>	In	115		ug/L			840042	828114 ✓	1
[	Ag	107	0.203	ug/L	0.005	2	32	2226	3
[	Cd	111	0.099	ug/L	0.006	6	72	480	5
[	Cd	114	0.104	ug/L	0.002	1	44	1106	0
[	Sb	121	0.189	ug/L	0.004	1	346	2744	0
[	Sb	123	0.194	ug/L	0.001	0	257	2127	1
[	Ba	135	0.492	ug/L	0.006	1	17	1848	2
[	Ba	137	0.487	ug/L	0.005	1	19	3157	2
[>	Tb	159		ug/L			1001666	982131 ✓	1
[	Tl	205	0.205	ug/L	0.007	3	206	6503	2
[	Pb	208	0.110	ug/L	0.002	1	157	4473	0
[	Bi	209		ug/L			2293546	2274129	0
[	Th	232	0.192	ug/L	0.002	0	1512	8735	1
[	U	238	0.195	ug/L	0.000	0	29	7949	1

VR34 : 00407

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~ICSA~~ 222222
Sample Dil Factor: 11.19.12 MJJ
Comments:
Sample Date/Time: Friday, November 16, 2012 15:48:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	709155 ✓	3
	Be	9	0.007	ug/L	0.002	38	8	25	25
	C	13		ug/L			63994	135711	1
	Cl	37		ug/L			3532807	10547836	1
>	Sc	45		ug/L			674505	851406	2
	V	51	0.142	ug/L	0.020	13	6013	9994	6
	V-1	51	1.444	ug/L	0.005	0	387	25034	2
	Cr	52	0.497	ug/L	0.032	6	17778	29679	1
	Cr	53	4.674	ug/L	0.093	1	210	8163	0
	Mn	55	0.064	ug/L	0.001	1	314	1683	2
	Co	59	0.025	ug/L	0.003	10	73	468	6
>	Ge	72		ug/L			426798	461713 ✓	1
	Ni	60	0.414	ug/L	0.010	2	26	1219	0
	Ni	62	4.588	ug/L	1.156	25	48	1934	25
	Cu	63	1.210	ug/L	0.101	8	88	7916	9
	Cu	65	0.430	ug/L	0.005	1	42	1292	1
	Zn	66	1.949	ug/L	0.016	0	141	3440	1
	Zn	67	7.846	ug/L	0.134	1	21	2255	0
	Zn	68	1.394	ug/L	0.064	4	144	1857	6
	As	75	0.063	ug/L	0.057	90	220	337	26
	As-1	75	0.467	ug/L	0.102	21	9153	10631	1
	Se	82	-0.333	ug/L	0.048	14	-1	-59	16
	Se	78	1.587	ug/L	0.552	34	9315	10775	1
	Mo	98	418.068	ug/L	8.534	2	35	1704184	2
	Y	89		ug/L			271155	295068	2
	Kr	83		ug/L			529	842	2
>	In	115		ug/L			840042	868906 ✓	2
	Ag	107	0.026	ug/L	0.002	7	32	330	8
	Cd	111	0.128	ug/L	0.010	7	72	630	7
	Cd	114	0.278	ug/L	0.011	3	44	3030	1
	Sb	121	0.074	ug/L	0.004	4	346	1344	5
	Sb	123	0.072	ug/L	0.002	2	257	999	1
	Ba	135	0.060	ug/L	0.004	7	17	251	5
	Ba	137	0.050	ug/L	0.004	7	19	359	8
>	Tb	159		ug/L			1001666	1055807 ✓	1
	Tl	205	0.042	ug/L	0.004	10	206	1614	9
	Pb	208	0.040	ug/L	0.001	3	157	1847	2
	Bi	209		ug/L			2293546	2177162	0
	Th	232	0.216	ug/L	0.103	47	1512	10361	39
	U	238	0.017	ug/L	0.001	4	29	778	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 15:55:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	651822	1
	Be	9	0.003	ug/L	0.002	48	8	15	20
	C	13		ug/L			63994	118709	0
	Cl	37		ug/L			3532807	9688038	3
>	Sc	45		ug/L			674505	684435	1
	V	51	0.098	ug/L	0.083	85	6013	7436	16
	V-1	51	1.418	ug/L	0.010	0	387	19773	1
	Cr	52	19.960	ug/L	0.107	0	17778	251769	1
	Cr	53	23.684	ug/L	0.311	1	210	32395	0
	Mn	55	19.365	ug/L	0.345	1	314	312395	0
	Co	59	18.880	ug/L	0.957	5	73	233300	3
>	Ge	72		ug/L			426798	405255	0
	Ni	60	20.012	ug/L	0.087	0	26	50564	0
	Ni	62	25.037	ug/L	1.339	5	48	9046	5
	Cu	63	20.880	ug/L	0.539	2	88	118492	2
	Cu	65	20.147	ug/L	0.121	0	42	51360	0
	Zn	66	19.841	ug/L	0.166	0	141	29507	0
	Zn	67	23.388	ug/L	0.399	1	21	5864	2
	Zn	68	18.588	ug/L	0.346	1	144	20044	1
	As	75	19.700	ug/L	0.319	1	220	27211	1
	As-1	75	20.002	ug/L	0.388	1	9153	36194	0
	Se	82	-0.434	ug/L	0.074	17	-1	-67	16
	Se	78	1.441	ug/L	0.255	17	9315	9402	0
	Mo	98	461.443	ug/L	2.033	0	35	1651065	0
	Y	89		ug/L			271155	268170	1
	Kr	83		ug/L			529	784	4
>	In	115		ug/L			840042	833177	1
	Ag	107	22.006	ug/L	0.580	2	32	239296	3
	Cd	111	19.695	ug/L	0.375	1	72	81799	0
	Cd	114	19.834	ug/L	0.482	2	44	204564	1
	Sb	121	0.049	ug/L	0.001	2	346	969	2
	Sb	123	0.053	ug/L	0.001	2	257	770	2
	Ba	135	0.052	ug/L	0.003	5	17	211	4
	Ba	137	0.039	ug/L	0.002	5	19	272	4
>	Tb	159		ug/L			1001666	1019512	0
	Tl	205	0.028	ug/L	0.001	4	206	1098	2
	Pb	208	0.037	ug/L	0.001	1	157	1674	1
	Bi	209		ug/L			2293546	2067717	3
	Th	232	0.039	ug/L	0.012	30	1512	3063	14
	U	238	-0.000	ug/L	0.000	251	29	26	34

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:02:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	643805	1
	Be	9	193.894	ug/L	4.482	2	8	439477	2
	C	13		ug/L			63994	64423	1
	Cl	37		ug/L			3532807	3718487	1
>	Sc	45		ug/L			674505	662247	1
	V	51	196.000	ug/L	1.534	0	6013	2575959	0
	V-1	51	193.120	ug/L	1.216	0	387	2553621	0
	Cr	52	194.948	ug/L	3.500	1	17778	2226056	0
	Cr	53	185.716	ug/L	2.916	1	210	244400	1
	Mn	55	190.415	ug/L	4.718	2	314	2969492	1
	Co	59	194.981	ug/L	3.209	1	73	2331691	1
>	Ge	72		ug/L			426798	388495	0
	Ni	60	198.627	ug/L	1.536	0	26	480895	0
	Ni	62	201.017	ug/L	2.367	1	48	69315	1
	Cu	63	198.612	ug/L	4.528	2	88	1079776	1
	Cu	65	201.635	ug/L	2.872	1	42	492433	1
	Zn	66	196.294	ug/L	3.256	1	141	278712	1
	Zn	67	196.592	ug/L	0.961	0	21	47106	1
	Zn	68	195.505	ug/L	3.953	2	144	200868	1
	As	75	204.100	ug/L	1.745	0	220	268392	0
	As-1	75	202.150	ug/L	1.334	0	9153	274813	0
	Se	82	202.844	ug/L	2.766	1	-1	29239	0
	Se	78	196.236	ug/L	3.291	1	9315	81240	1
	Mo	98	233.412	ug/L	4.275	1	35	800579	1
	Y	89		ug/L			271155	256233	1
	Kr	83		ug/L			529	733	3
>	In	115		ug/L			840042	799590	1
	Ag	107	224.823	ug/L	2.878	1	32	2345216	0
	Cd	111	198.829	ug/L	2.951	1	72	791957	1
	Cd	114	197.765	ug/L	2.156	1	44	1957303	0
	Sb	121	208.240	ug/L	5.536	2	346	2553825	1
	Sb	123	203.263	ug/L	3.448	1	257	1893203	1
	Ba	135	201.609	ug/L	3.063	1	17	724908	1
	Ba	137	204.341	ug/L	3.038	1	19	1270873	0
>	Tb	159		ug/L			1001666	987852	0
	Tl	205	198.892	ug/L	1.163	0	206	6155371	0
	Pb	208	197.398	ug/L	1.403	0	157	7807810	0
	Bi	209		ug/L			2293546	1922412	0
	Th	232	198.818	ug/L	0.973	0	1512	7555419	0
	U	238	196.618	ug/L	1.482	0	29	8019500	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:09:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	625649	1
	Be	9	292.016	ug/L	6.005	2	8	643146	1
	C	13		ug/L			63994	66112	0
	Cl	37		ug/L			3532807	3720039	0
>	Sc	45		ug/L			674505	631164	0
	V	51	306.509	ug/L	4.669	1	6013	3835950	0
	V-1	51	303.265	ug/L	5.141	1	387	3821385	0
	Cr	52	304.815	ug/L	2.717	0	17778	3308106	0
	Cr	53	294.426	ug/L	3.566	1	210	369158	0
	Mn	55	301.532	ug/L	4.866	1	314	4481781	0
	Co	59	302.091	ug/L	2.656	0	73	3442831	0
>	Ge	72		ug/L			426798	382426	0
	Ni	60	296.776	ug/L	1.325	0	26	707324	1
	Ni	62	304.019	ug/L	1.773	0	48	103168	0
	Cu	63	290.623	ug/L	5.679	1	88	1555269	1
	Cu	65	294.523	ug/L	1.468	0	42	707976	0
	Zn	66	282.879	ug/L	3.139	1	141	395309	0
	Zn	67	287.842	ug/L	0.602	0	21	67884	0
	Zn	68	278.979	ug/L	4.208	1	144	282121	2
	As	75	301.941	ug/L	4.616	1	220	390744	1
	As-1	75	302.646	ug/L	4.440	1	9153	400915	0
	Se	82	286.664	ug/L	3.783	1	-1	40678	1
	Se	78	289.679	ug/L	3.601	1	9315	114077	1
	Mo	98	328.562	ug/L	7.014	2	35	1109383	2
	Y	89		ug/L			271155	244846	1
	Kr	83		ug/L			529	796	3
>	In	115		ug/L			840042	776169	0
	Ag	107	308.042	ug/L	6.252	2	32	3119645	2
	Cd	111	290.846	ug/L	2.150	0	72	1124602	0
	Cd	114	305.321	ug/L	1.910	0	44	2933622	0
	Sb	121	306.155	ug/L	4.675	1	346	3645530	1
	Sb	123	306.094	ug/L	3.686	1	257	2767812	1
	Ba	135	305.088	ug/L	3.069	1	17	1064971	1
	Ba	137	309.899	ug/L	2.187	0	19	1871209	0
>	Tb	159		ug/L			1001666	962277	0
	Tl	205	296.494	ug/L	0.086	0	206	8938433	0
	Pb	208	298.811	ug/L	1.586	0	157	11513336	0
	Bi	209		ug/L			2293546	1836063	0
	Th	232	302.204	ug/L	4.714	1	1512	11185862	1
	U	238	295.238	ug/L	4.680	1	29	11729888	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:15:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	660964	2
[	Be	9	0.007	ug/L	0.007	108	8	24	68
	C	13		ug/L			63994	62290	1
	Cl	37		ug/L			3532807	3575475	2
[>	Sc	45		ug/L			674505	648232	1
[	V	51	-0.002	ug/L	0.010	469	6013	5749	1
[	V-1	51	0.004	ug/L	0.007	163	387	424	18
[	Cr	52	-0.014	ug/L	0.021	149	17778	16928	0
[	Cr	53	0.007	ug/L	0.031	468	210	210	17
[	Mn	55	0.012	ug/L	0.004	31	314	487	10
[	Co	59	0.003	ug/L	0.003	124	73	102	38
[>	Ge	72		ug/L			426798	414211	2
[	Ni	60	0.038	ug/L	0.003	7	26	123	5
[	Ni	62	1.539	ug/L	0.447	29	48	610	24
[	Cu	63	0.120	ug/L	0.041	34	88	779	28
[	Cu	65	0.015	ug/L	0.006	39	42	78	18
[	Zn	66	0.814	ug/L	0.008	0	141	1369	1
[	Zn	67	0.686	ug/L	0.053	7	21	195	5
[	Zn	68	0.758	ug/L	0.021	2	144	969	3
[	As	75	0.016	ug/L	0.008	52	220	235	3
[	As-1	75	0.130	ug/L	0.150	115	9153	9062	0
[	Se	82	-0.080	ug/L	0.063	78	-1	-14	67
[	Se	78	0.391	ug/L	0.532	136	9315	9192	0
[	Mo	98	0.042	ug/L	0.007	17	35	187	14
	Y	89		ug/L			271155	266145	0
	Kr	83		ug/L			529	546	2
[>	In	115		ug/L			840042	816768	0
[	Ag	107	0.008	ug/L	0.004	46	32	117	34
[	Cd	111	0.013	ug/L	0.017	127	72	125	55
[	Cd	114	0.014	ug/L	0.021	154	44	184	117
[	Sb	121	0.291	ug/L	0.013	4	346	3977	4
[	Sb	123	0.295	ug/L	0.003	1	257	3061	1
[	Ba	135	0.014	ug/L	0.015	105	17	67	79
[	Ba	137	0.015	ug/L	0.013	87	19	116	73
[>	Tb	159		ug/L			1001666	983468	0
[	Tl	205	0.044	ug/L	0.012	26	206	1558	24
[	Pb	208	0.013	ug/L	0.009	72	157	659	55
[	Bi	209		ug/L			2293546	2240936	1
[	Th	232	0.174	ug/L	0.021	12	1512	8052	9
[	U	238	0.009	ug/L	0.006	67	29	373	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:21:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	679448	1
	Be	9	0.006	ug/L	0.007	120	8	22	74
	C	13		ug/L			63994	63657	1
	Cl	37		ug/L			3532807	3565042	4
>	Sc	45		ug/L			674505	659410	1
	V	51	-0.009	ug/L	0.016	186	6013	5763	4
	V-1	51	0.003	ug/L	0.017	603	387	417	54
	Cr	52	-0.045	ug/L	0.039	85	17778	16862	1
	Cr	53	-0.007	ug/L	0.010	142	210	196	8
	Mn	55	0.017	ug/L	0.016	96	314	571	45
	Co	59	0.008	ug/L	0.013	153	73	172	90
>	Ge	72		ug/L			426798	413152	1
	Ni	60	0.028	ug/L	0.019	69	26	96	52
	Ni	62	0.260	ug/L	0.042	16	48	142	11
	Cu	63	0.031	ug/L	0.012	38	88	266	26
	Cu	65	0.011	ug/L	0.010	91	42	70	39
	Zn	66	0.430	ug/L	0.031	7	141	786	6
	Zn	67	0.407	ug/L	0.024	5	21	124	5
	Zn	68	0.451	ug/L	0.027	5	144	631	3
	As	75	0.013	ug/L	0.030	233	220	232	19
	As-1	75	0.120	ug/L	0.088	72	9153	9028	1
	Se	82	-0.007	ug/L	0.043	640	-1	-2	234
	Se	78	0.404	ug/L	0.340	84	9315	9176	1
	Mo	98	0.009	ug/L	0.003	30	35	69	14
	Y	89		ug/L			271155	257050	1
	Kr	83		ug/L			529	527	4
>	In	115		ug/L			840042	825856	0
	Ag	107	0.002	ug/L	0.001	51	32	51	19
	Cd	111	0.006	ug/L	0.000	7	72	96	1
	Cd	114	0.002	ug/L	0.002	108	44	61	30
	Sb	121	0.066	ug/L	0.011	16	346	1175	11
	Sb	123	0.067	ug/L	0.011	16	257	899	11
	Ba	135	0.008	ug/L	0.002	20	17	47	13
	Ba	137	0.009	ug/L	0.003	35	19	78	26
>	Tb	159		ug/L			1001666	981711	1
	Tl	205	0.021	ug/L	0.014	64	206	850	47
	Pb	208	0.005	ug/L	0.001	9	157	366	6
	Bi	209		ug/L			2293546	2260079	0
	Th	232	0.030	ug/L	0.003	10	1512	2612	4
	U	238	0.002	ug/L	0.001	47	29	95	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:27:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	648610	0
	Be	9	0.007	ug/L	0.002	32	8	25	22
	C	13		ug/L			63994	114971	1
	Cl	37		ug/L			3532807	9219316	0
>	Sc	45		ug/L			674505	665881	2
	V	51	0.105	ug/L	0.034	32	6013	7314	6
	V-1	51	1.430	ug/L	0.046	3	387	19385	1
	Cr	52	0.534	ug/L	0.023	4	17778	23636	1
	Cr	53	4.785	ug/L	0.109	2	210	6531	0
	Mn	55	0.066	ug/L	0.001	2	314	1341	0
	Co	59	0.024	ug/L	0.000	2	73	359	3
>	Ge	72		ug/L			426798	398034	1
	Ni	60	0.383	ug/L	0.031	7	26	974	8
	Ni	62	4.605	ug/L	0.837	18	48	1669	17
	Cu	63	1.155	ug/L	0.082	7	88	6513	5
	Cu	65	0.425	ug/L	0.015	3	42	1101	3
	Zn	66	1.677	ug/L	0.067	3	141	2569	2
	Zn	67	7.418	ug/L	0.113	1	21	1839	0
	Zn	68	1.069	ug/L	0.017	1	144	1258	3
	As	75	0.112	ug/L	0.057	50	220	356	22
	As-1	75	0.473	ug/L	0.020	4	9153	9174	1
	Se	82	-0.419	ug/L	0.080	19	-1	-63	17
	Se	78	1.478	ug/L	0.287	19	9315	9248	1
	Mo	98	449.119 ✓	ug/L	10.973	2	35	1578060	1
	Y	89		ug/L			271155	263434	0
	Kr	83		ug/L			529	786	5
>	In	115		ug/L			840042	822154	1
	Ag	107	0.030	ug/L	0.002	7	32	354	6
	Cd	111	0.113	ug/L	0.008	6	72	532	4
	Cd	114	0.272	ug/L	0.011	3	44	2813	2
	Sb	121	0.108	ug/L	0.008	7	346	1697	7
	Sb	123	0.108	ug/L	0.004	3	257	1285	3
	Ba	135	0.057	ug/L	0.003	4	17	226	3
	Ba	137	0.050	ug/L	0.002	3	19	337	4
>	Tb	159		ug/L			1001666	1001600	0
	Tl	205	0.047	ug/L	0.005	9	206	1687	8
	Pb	208	0.039	ug/L	0.001	2	157	1741	2
	Bi	209		ug/L			2293546	1966403	1
	Th	232	0.211	ug/L	0.111	52	1512	9656	44
	U	238	0.017	ug/L	0.000	1	29	723	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:32:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	635191	1
	Be	9	0.001	ug/L	0.002	175	8	10	39
	C	13		ug/L			63994	61914	4
	Cl	37		ug/L			3532807	3591312	4
>	Sc	45		ug/L			674505	640852	0
	V	51	-0.004	ug/L	0.005	106	6013	5657	1
	V-1	51	0.078	ug/L	0.017	21	387	1372	15
	Cr	52	-0.038	ug/L	0.011	27	17778	16471	1
	Cr	53	0.229	ug/L	0.055	23	210	491	14
	Mn	55	0.009	ug/L	0.000	3	314	439	1
	Co	59	-0.000	ug/L	0.001	435	73	66	17
>	Ge	72		ug/L			426798	393570	0
	Ni	60	0.049	ug/L	0.002	4	26	143	4
	Ni	62	0.245	ug/L	0.078	31	48	130	20
	Cu	63	0.033	ug/L	0.005	14	88	261	10
	Cu	65	0.014	ug/L	0.005	31	42	74	15
	Zn	66	0.943	ug/L	0.050	5	141	1485	4
	Zn	67	0.841	ug/L	0.009	1	21	223	0
	Zn	68	0.888	ug/L	0.042	4	144	1056	3
	As	75	0.038	ug/L	0.022	57	220	254	12
	As-1	75	0.183	ug/L	0.042	22	9153	8684	0
	Se	82	-0.029	ug/L	0.049	168	-1	-5	120
	Se	78	0.599	ug/L	0.213	35	9315	8815	0
	Mo	98	0.074	ug/L	0.012	16	35	291	14
	Y	89		ug/L			271155	258714	2
	Kr	83		ug/L			529	541	1
>	In	115		ug/L			840042	822509	0
	Ag	107	0.000	ug/L	0.000	197	32	34	14
	Cd	111	0.004	ug/L	0.003	61	72	88	12
	Cd	114	0.000	ug/L	0.001	825	44	45	23
	Sb	121	0.008	ug/L	0.006	80	346	436	17
	Sb	123	0.008	ug/L	0.004	46	257	329	10
	Ba	135	0.006	ug/L	0.002	35	17	40	20
	Ba	137	0.008	ug/L	0.001	7	19	68	5
>	Tb	159		ug/L			1001666	992149	2
	Tl	205	0.000	ug/L	0.000	168	206	213	5
	Pb	208	0.008	ug/L	0.001	9	157	467	4
	Bi	209		ug/L			2293546	2287878	0
	Th	232	-0.029	ug/L	0.001	3	1512	407	10
	U	238	-0.000	ug/L	0.000	87	29	22	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:37:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	657826 ✓	0
	Be	9	50.406	ug/L	1.336	2	8	116738	2
	C	13		ug/L			63994	62859	0
	Cl	37		ug/L			3532807	3670750	0
>	Sc	45		ug/L			674505	649136 ✓	1
	V	51	49.115	ug/L	0.079	0	6013	637090	1
	V-1	51	49.194	ug/L	0.317	0	387	637851	1
	Cr	52	48.659	ug/L	0.508	1	17778	557451	0
	Cr	53	48.923	ug/L	1.476	3	210	63235	1
	Mn	55	49.341	ug/L	1.593	3	314	754271	1
	Co	59	50.377	ug/L	1.722	3	73	590321	1
>	Ge	72		ug/L			426798	405628 ✓	0
	Ni	60	49.121	ug/L	0.511	1	26	124195	1
	Ni	62	51.130	ug/L	0.944	1	48	18442	1
	Cu	63	49.726	ug/L	0.664	1	88	282360	1
	Cu	65	51.431	ug/L	0.410	0	42	131164	0
	Zn	66	50.272	ug/L	0.766	1	141	74628	1
	Zn	67	50.444	ug/L	1.075	2	21	12634	2
	Zn	68	50.640	ug/L	1.295	2	144	54427	2
	As	75	50.678	ug/L	0.364	0	220	69740	0
	As-1	75	50.051	ug/L	0.308	0	9153	77589	0
	Se	82	52.605	ug/L	0.466	0	-1	7916	0
	Se	78	50.390	ug/L	0.456	0	9315	28361	0
	Mo	98	55.258	ug/L	0.522	0	35	197924	0
	Y	89		ug/L			271155	261496	1
	Kr	83		ug/L			529	549	4
>	In	115		ug/L			840042	822790 ✓	0
	Ag	107	55.340	ug/L	0.802	1	32	594147	1
	Cd	111	50.572	ug/L	0.608	1	72	207344	0
	Cd	114	50.658	ug/L	0.600	1	44	516035	1
	Sb	121	50.599	ug/L	0.546	1	346	638961	0
	Sb	123	50.378	ug/L	0.719	1	257	483083	1
	Ba	135	49.846	ug/L	0.139	0	17	184458	0
	Ba	137	49.733	ug/L	0.903	1	19	318365	2
>	Tb	159		ug/L			1001666	1005462 ✓	1
	Tl	205	48.466	ug/L	0.474	0	206	1526739	0
	Pb	208	49.781	ug/L	0.322	0	157	2004186	0
	Bi	209		ug/L			2293546	2225104	0
	Th	232	47.939	ug/L	0.887	1	1512	1855266	1
	U	238	48.978	ug/L	1.646	3	29	2033809	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 16:44:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	650878	3
	Be	9	0.004	ug/L	0.002	44	8	16	19
	C	13		ug/L			63994	63249	2
	Cl	37		ug/L			3532807	3537997	2
>	Sc	45		ug/L			674505	640016	1
	V	51	-0.015	ug/L	0.003	18	6013	5518	1
	V-1	51	0.007	ug/L	0.001	13	387	461	2
	Cr	52	-0.048	ug/L	0.030	62	17778	16346	1
	Cr	53	0.024	ug/L	0.022	91	210	230	11
	Mn	55	0.001	ug/L	0.001	214	314	307	5
	Co	59	0.000	ug/L	0.001	220	73	73	10
>	Ge	72		ug/L			426798	397130	1
	Ni	60	0.000	ug/L	0.001	1625	26	24	9
	Ni	62	0.089	ug/L	0.031	35	48	76	15
	Cu	63	0.003	ug/L	0.003	78	88	100	13
	Cu	65	-0.004	ug/L	0.004	82	42	28	32
	Zn	66	0.001	ug/L	0.007	698	141	133	8
	Zn	67	-0.008	ug/L	0.008	103	21	18	9
	Zn	68	-0.008	ug/L	0.003	35	144	125	3
	As	75	0.037	ug/L	0.014	37	220	255	7
	As-1	75	0.158	ug/L	0.007	4	9153	8729	1
	Se	82	-0.006	ug/L	0.055	847	-1	-2	299
	Se	78	0.491	ug/L	0.053	10	9315	8854	1
	Mo	98	0.013	ug/L	0.001	8	35	78	3
	Y	89		ug/L			271155	254925	0
	Kr	83		ug/L			529	525	3
>	In	115		ug/L			840042	806547	0
	Ag	107	0.001	ug/L	0.000	21	32	39	4
	Cd	111	0.003	ug/L	0.001	36	72	81	4
	Cd	114	0.000	ug/L	0.001	711	44	44	15
	Sb	121	0.049	ug/L	0.006	12	346	942	7
	Sb	123	0.053	ug/L	0.008	14	257	740	9
	Ba	135	-0.001	ug/L	0.001	99	17	14	16
	Ba	137	0.001	ug/L	0.001	67	19	25	18
>	Tb	159		ug/L			1001666	967690	2
	Tl	205	0.004	ug/L	0.004	91	206	335	38
	Pb	208	0.000	ug/L	0.000	54	157	171	7
	Bi	209		ug/L			2293546	2234478	1
	Th	232	0.071	ug/L	0.005	6	1512	4083	2
	U	238	0.001	ug/L	0.000	13	29	85	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:48:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	681027	0
[	Be	9	~0.004	ug/L	0.001	34	8	17	17
	C	13		ug/L			63994	67576	1
	Cl	37		ug/L			3532807	3593519	3
[>	Sc	45		ug/L			674505	660697	1
[	V	51	-0.003	ug/L	0.005	141	6013	5847	0
[	V-1	51	0.004	ug/L	0.001	24	387	426	1
[	Cr	52	-0.014	ug/L	0.012	86	17778	17252	0
[	Cr	53	0.008	ug/L	0.003	33	210	216	2
[	Mn	55	0.023	ug/L	0.000	0	314	665	1
[	Co	59	0.002	ug/L	0.001	39	73	93	8
[>	Ge	72		ug/L			426798	408504	1
[	Ni	60	0.009	ug/L	0.001	16	26	47	6
[	Ni	62	0.028	ug/L	0.013	48	48	56	7
[	Cu	63	0.063	ug/L	0.003	5	88	446	4
[	Cu	65	0.059	ug/L	0.003	4	42	192	2
[	Zn	66	0.489	ug/L	0.011	2	141	865	1
[	Zn	67	0.446	ug/L	0.026	5	21	132	5
[	Zn	68	0.507	ug/L	0.022	4	144	685	2
[	As	75	0.026	ug/L	0.013	48	220	246	6
[	As-1	75	0.097	ug/L	0.095	97	9153	8894	1
[	Se	82	0.000	ug/L	0.076	245321	-1	-1	706
[	Se	78	0.300	ug/L	0.322	107	9315	9032	1
[	Mo	98	0.005	ug/L	0.001	20	35	51	7
	Y	89		ug/L			271155	263082	1
	Kr	83		ug/L			529	528	6
[>	In	115		ug/L			840042	832193	2
[	Ag	107	0.001	ug/L	0.001	171	32	39	30
[	Cd	111	0.004	ug/L	0.002	46	72	88	6
[	Cd	114	0.001	ug/L	0.001	71	44	53	11
[	Sb	121	0.005	ug/L	0.004	92	346	403	12
[	Sb	123	0.004	ug/L	0.005	136	257	288	14
[	Ba	135	0.016	ug/L	0.002	14	17	75	8
[	Ba	137	0.019	ug/L	0.001	7	19	142	5
[>	Tb	159		ug/L			1001666	996605	1
[	Tl	205	0.002	ug/L	0.003	197	206	252	35
[	Pb	208	0.014	ug/L	0.001	3	157	704	1
[	Bi	209		ug/L			2293546	2290038	1
[	Th	232	0.057	ug/L	0.017	30	1512	3710	19
[	U	238	0.000	ug/L	0.000	510	29	30	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:52:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	662078	1
	Be	9	25.397	ug/L	0.550	2	8	59195	1
	C	13		ug/L			63994	66946	0
	Cl	37		ug/L			3532807	3624604	1
>	Sc	45		ug/L			674505	668252	0
	V	51	24.976	ug/L	0.084	0	6013	336437	1
	V-1	51	24.812	ug/L	0.194	0	387	331420	1
	Cr	52	25.249	ug/L	0.753	2	17778	306242	1
	Cr	53	24.715	ug/L	0.139	0	210	33000	0
	Mn	55	25.082	ug/L	0.657	2	314	394958	1
	Co	59	25.490	ug/L	0.158	0	73	307657	1
>	Ge	72		ug/L			426798	403505	1
	Ni	60	26.564	ug/L	0.599	2	26	66810	1
	Ni	62	26.067	ug/L	0.841	3	48	9377	4
	Cu	63	27.045	ug/L	0.084	0	88	152804	1
	Cu	65	27.848	ug/L	0.073	0	42	70668	0
	Zn	66	85.013	ug/L	0.205	0	141	125449	1
	Zn	67	78.284	ug/L	1.272	1	21	19492	0
	Zn	68	82.754	ug/L	0.763	0	144	88395	2
	As	75	26.135	ug/L	0.322	1	220	35879	2
	As-1	75	25.647	ug/L	0.326	1	9153	43768	1
	Se	82	84.354	ug/L	0.586	0	-1	12628	1
	Se	78	81.935	ug/L	1.161	1	9315	40358	0
	Mo	98	26.596	ug/L	0.317	1	35	94779	0
	Y	89		ug/L			271155	261404	2
	Kr	83		ug/L			529	535	7
>	In	115		ug/L			840042	836348	1
	Ag	107	28.100	ug/L	0.455	1	32	306611	0
	Cd	111	25.212	ug/L	0.202	0	72	105108	1
	Cd	114	25.212	ug/L	0.209	0	44	261045	0
	Sb	121	24.825	ug/L	0.540	2	346	318774	1
	Sb	123	24.911	ug/L	0.343	1	257	242917	0
	Ba	135	25.526	ug/L	0.273	1	17	96019	1
	Ba	137	25.439	ug/L	0.308	1	19	165509	0
>	Tb	159		ug/L			1001666	1012343	0
	Tl	205	25.523	ug/L	0.049	0	206	809663	0
	Pb	208	26.079	ug/L	0.188	0	157	1057206	0
	Bi	209		ug/L			2293546	2291502	0
	Th	232	24.401	ug/L	0.360	1	1512	951598	0
	U	238	24.197	ug/L	0.128	0	29	1011465	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 16:56:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

BL

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	719001	1
[	Be	9	1.160	ug/L	0.039	3	8	2943	2
	C	13		ug/L			63994	86323	1
	Cl	37		ug/L			3532807	3564561	2
[>	Sc	45		ug/L			674505	777250	2
[	V	51	38.470	ug/L	1.646	4	6013	598500	1
[	V-1	51	38.480	ug/L	2.031	5	387	596934	2
[	Cr	52	32.065	ug/L	0.358	1	17778	446801	1
[	Cr	53	32.266	ug/L	1.670	5	210	49987	2
[	Mn	55	402.848	ug/L	9.693	2	314	7370606	0
[	Co	59	9.370	ug/L	0.523	5	73	131451	2
[>	Ge	72		ug/L			426798	414419	1
[	Ni	60	29.094	ug/L	0.166	0	26	75161	1
[	Ni	62	31.097	ug/L	0.737	2	48	11479	3
[	Cu	63	28.196	ug/L	0.261	0	88	163599	0
[	Cu	65	28.476	ug/L	0.498	1	42	74211	1
[	Zn	66	107.635	ug/L	1.512	1	141	163071	0
[	Zn	67	126.122	ug/L	1.674	1	21	32240	0
[	Zn	68	118.252	ug/L	1.413	1	144	129648	0
[	As	75	9.035	ug/L	0.026	0	220	12879	1
[	As-1	75	8.809	ug/L	0.071	0	9153	21273	0
[	Se	82	-0.905	ug/L	0.050	5	-1	-141	6
[	Se	78	-0.135	ug/L	0.166	122	9315	8991	0
[	Mo	98	0.380	ug/L	0.019	4	35	1424	3
	Y	89		ug/L			271155	492422	0
	Kr	83		ug/L			529	1244	3
[>	In	115		ug/L			840042	826716	1
[	Ag	107	0.315	ug/L	0.009	3	32	3430	1
[	Cd	111	0.713	ug/L	0.125	17	72	3003	15
[	Cd	114	0.346	ug/L	0.007	2	44	3585	1
[	Sb	121	0.034	ug/L	0.006	17	346	775	8
[	Sb	123	0.038	ug/L	0.005	12	257	621	6
[	Ba	135	387.808	ug/L	5.365	1	17	1441714	0
[	Ba	137	408.216	ug/L	6.194	1	19	2625099	0
[>	Tb	159		ug/L			1001666	1020055	0
[	Tl	205	0.134	ug/L	0.004	2	206	4482	2
[	Pb	208	25.521	ug/L	0.248	0	157	1042531	1
[	Bi	209		ug/L			2293546	2192860	0
[	Th	232	5.279	ug/L	0.055	1	1512	208646	1
[	U	238	2.068	ug/L	0.018	0	29	87116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:01:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	724604	2
	Be	9	1.148	ug/L	0.029	2	8	2936	3
	C	13		ug/L			63994	81902	0
	Cl	37		ug/L			3532807	3636535	0
>	Sc	45		ug/L			674505	784571	1
	V	51	37.021	ug/L	0.622	1	6013	582032	0
	V-1	51	36.875	ug/L	0.558	1	387	577965	0
	Cr	52	26.037	ug/L	0.960	3	17778	370050	1
	Cr	53	25.857	ug/L	0.598	2	210	40515	0
	Mn	55	553.659	ug/L	2.164	0	314	10229656	1
	Co	59	9.225	ug/L	0.239	2	73	130737	1
>	Ge	72		ug/L			426798	414791	0
	Ni	60	31.326	ug/L	0.448	1	26	80995	0
	Ni	62	33.508	ug/L	0.583	1	48	12374	1
	Cu	63	31.851	ug/L	0.470	1	88	184980	1
	Cu	65	32.837	ug/L	0.188	0	42	85650	0
	Zn	66	100.666	ug/L	2.190	2	141	152666	1
	Zn	67	118.239	ug/L	1.860	1	21	30256	1
	Zn	68	111.058	ug/L	1.986	1	144	121897	2
	As	75	9.551	ug/L	0.134	1	220	13613	0
	As-1	75	9.311	ug/L	0.174	1	9153	21999	0
	Se	82	-0.624	ug/L	0.083	13	-1	-97	13
	Se	78	-0.060	ug/L	0.179	297	9315	9029	0
	Mo	98	0.382	ug/L	0.014	3	35	1435	3
	Y	89		ug/L			271155	530125	0
	Kr	83		ug/L			529	1164	4
>	In	115		ug/L			840042	830296	2
	Ag	107	0.430	ug/L	0.016	3	32	4686	2
	Cd	111	0.760	ug/L	0.034	4	72	3217	4
	Cd	114	0.363	ug/L	0.011	3	44	3771	2
	Sb	121	0.016	ug/L	0.005	28	346	547	9
	Sb	123	0.015	ug/L	0.005	32	257	397	10
	Ba	135	354.733	ug/L	9.097	2	17	1324142	0
	Ba	137	364.359	ug/L	6.813	1	19	2352891	0
>	Tb	159		ug/L			1001666	1025497	0
	Tl	205	0.148	ug/L	0.001	0	206	4972	1
	Pb	208	20.049	ug/L	0.183	0	157	823367	0
	Bi	209		ug/L			2293546	2154270	0
	Th	232	5.438	ug/L	0.055	1	1512	216027	0
	U	238	2.478	ug/L	0.027	1	29	104949	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:05:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	736751	0
	Be	9	1.143	ug/L	0.028	2	8	2974	2
	C	13		ug/L			63994	83590	2
	Cl	37		ug/L			3532807	3690345	4
>	Sc	45		ug/L			674505	808820	3
	V	51	35.402	ug/L	1.755	4	6013	573523	1
	V-1	51	35.179	ug/L	1.507	4	387	567930	0
	Cr	52	26.766	ug/L	1.154	4	17778	391319	0
	Cr	53	26.276	ug/L	0.757	2	210	42430	2
	Mn	55	389.302	ug/L	21.927	5	314	7406021	2
	Co	59	8.490	ug/L	0.286	3	73	123984	0
>	Ge	72		ug/L			426798	415316	0
	Ni	60	26.317	ug/L	0.236	0	26	68138	0
	Ni	62	29.105	ug/L	0.757	2	48	10768	2
	Cu	63	34.877	ug/L	0.562	1	88	202804	2
	Cu	65	36.036	ug/L	0.471	1	42	94111	1
	Zn	66	98.266	ug/L	1.350	1	141	149236	1
	Zn	67	111.843	ug/L	0.594	0	21	28658	0
	Zn	68	103.809	ug/L	0.865	0	144	114089	0
	As	75	8.086	ug/L	0.088	1	220	11574	1
	As-1	75	7.877	ug/L	0.078	0	9153	20007	0
	Se	82	-0.609	ug/L	0.032	5	-1	-95	5
	Se	78	0.132	ug/L	0.132	100	9315	9117	0
	Mo	98	0.300	ug/L	0.012	4	35	1136	4
	Y	89		ug/L			271155	603270	1
	Kr	83		ug/L			529	1208	3
>	In	115		ug/L			840042	818477	1
	Ag	107	0.741	ug/L	0.011	1	32	7944	0
	Cd	111	0.705	ug/L	0.038	5	72	2943	3
	Cd	114	0.263	ug/L	0.005	1	44	2706	2
	Sb	121	0.007	ug/L	0.001	15	346	422	2
	Sb	123	0.010	ug/L	0.004	43	257	342	10
	Ba	135	283.472	ug/L	6.380	2	17	1043301	1
	Ba	137	285.217	ug/L	7.970	2	19	1815590	1
>	Tb	159		ug/L			1001666	1036163	0
	Tl	205	0.147	ug/L	0.001	0	206	4980	0
	Pb	208	17.768	ug/L	0.167	0	157	737299	0
	Bi	209		ug/L			2293546	2090871	4
	Th	232	5.269	ug/L	0.067	1	1512	211539	1
	U	238	2.828	ug/L	0.039	1	29	121036	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:09:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	700421	1
[	Be	9	0.846	ug/L	0.026	3	8	2095	2
	C	13		ug/L			63994	89314	2
	Cl	37		ug/L			3532807	3553860	1
[>	Sc	45		ug/L			674505	752480	0
[	V	51	30.951	ug/L	0.054	0	6013	467875	0
[	V-1	51	30.864	ug/L	0.237	0	387	464099	1
[	Cr	52	20.723	ug/L	0.389	1	17778	286614	1
[	Cr	53	20.712	ug/L	0.285	1	210	31179	1
[	Mn	55	837.648	ug/L	2.980	0	314	14843840	0
[	Co	59	7.657	ug/L	0.107	1	73	104127	1
[>	Ge	72		ug/L			426798	412325	1
[	Ni	60	24.273	ug/L	0.372	1	26	62388	1
[	Ni	62	25.239	ug/L	0.300	1	48	9276	0
[	Cu	63	15.385	ug/L	0.193	1	88	88849	0
[	Cu	65	15.885	ug/L	0.506	3	42	41194	1
[	Zn	66	152.222	ug/L	0.679	0	141	229417	1
[	Zn	67	165.866	ug/L	3.353	2	21	42174	0
[	Zn	68	161.828	ug/L	4.372	2	144	176440	1
[	As	75	9.871	ug/L	0.079	0	220	13978	1
[	As-1	75	9.821	ug/L	0.198	2	9153	22580	0
[	Se	82	-0.508	ug/L	0.081	15	-1	-79	17
[	Se	78	0.193	ug/L	0.469	243	9315	9073	0
[	Mo	98	0.397	ug/L	0.015	3	35	1480	1
	Y	89		ug/L			271155	348931	3
	Kr	83		ug/L			529	888	4
[>	In	115		ug/L			840042	814873	0
[	Ag	107	0.238	ug/L	0.011	4	32	2566	4
[	Cd	111	1.281	ug/L	0.049	3	72	5269	3
[	Cd	114	1.045	ug/L	0.012	1	44	10582	1
[	Sb	121	0.038	ug/L	0.003	7	346	805	5
[	Sb	123	0.038	ug/L	0.002	6	257	608	4
[	Ba	135	485.039	ug/L	10.130	2	17	1777447	1
[	Ba	137	505.252	ug/L	1.708	0	19	3202923	1
[>	Tb	159		ug/L			1001666	991390	1
[	Tl	205	0.125	ug/L	0.002	1	206	4092	1
[	Pb	208	37.627	ug/L	0.577	1	157	1493627	1
[	Bi	209		ug/L			2293546	2107174	4
[	Th	232	4.088	ug/L	0.047	1	1512	157374	0
[	U	238	0.596	ug/L	0.003	0	29	24428	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:13:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			681751	716563	1
[	**Be**	**9**	**0.784**	ug/L	0.031	3	8	1987	3
	C	**13**		ug/L			63994	103357	3
	Cl	**37**		ug/L			3532807	3657254	1
[>	**Sc**	**45**		ug/L			674505	743893	1
[	**V**	**51**	**32.403**	ug/L	0.646	1	6013	483848	1
[	**V-1**	**51**	**32.243**	ug/L	0.452	1	387	479229	1
[	**Cr**	**52**	**23.860**	ug/L	0.751	3	17778	323207	2
[	**Cr**	**53**	**23.571**	ug/L	0.151	0	210	35045	1
[	**Mn**	**55**	**1071.543**	ug/L	22.639	2	314	18770515	2
[	**Co**	**59**	**7.660**	ug/L	0.159	2	73	102959	2
[>	**Ge**	**72**		ug/L			426798	424780	1
[	**Ni**	**60**	**20.053**	ug/L	0.788	3	26	53090	2
[	**Ni**	**62**	**21.771**	ug/L	0.287	1	48	8251	1
[	**Cu**	**63**	**19.769**	ug/L	0.432	2	88	117587	1
[	**Cu**	**65**	**20.134**	ug/L	0.047	0	42	53798	1
[	**Zn**	**66**	**128.889**	ug/L	0.215	0	141	200148	1
[	**Zn**	**67**	**133.184**	ug/L	1.420	1	21	34896	0
[	**Zn**	**68**	**134.415**	ug/L	0.739	0	144	151043	0
[	**As**	**75**	**17.160**	ug/L	0.274	1	220	24873	1
[	**As-1**	**75**	**16.991**	ug/L	0.299	1	9153	33598	1
[	**Se**	**82**	**-0.130**	ug/L	0.143	109	-1	-22	101
[	**Se**	**78**	**-0.016**	ug/L	0.315	1980	9315	9264	0
[	**Mo**	**98**	**0.499**	ug/L	0.010	1	35	1908	0
	Y	**89**		ug/L			271155	364431	1
	Kr	**83**		ug/L			529	790	6
[>	**In**	**115**		ug/L			840042	848740	1
[	**Ag**	**107**	**0.109**	ug/L	0.009	8	32	1239	6
[	**Cd**	**111**	**1.714**	ug/L	0.025	1	72	7317	0
[	**Cd**	**114**	**1.613**	ug/L	0.022	1	44	16994	0
[	**Sb**	**121**	**0.093**	ug/L	0.005	5	346	1555	2
[	**Sb**	**123**	**0.092**	ug/L	0.001	1	257	1171	2
[	**Ba**	**135**	**272.461**	ug/L	2.209	0	17	1039913	0
[	**Ba**	**137**	**275.435**	ug/L	5.409	1	19	1818346	1
[>	**Tb**	**159**		ug/L			1001666	1013774	1
[	**Tl**	**205**	**0.145**	ug/L	0.004	2	206	4801	2
[	**Pb**	**208**	**71.785**	ug/L	0.480	0	157	2913973	1
[	**Bi**	**209**		ug/L			2293546	2210852	2
[	**Th**	**232**	**3.564**	ug/L	0.013	0	1512	140492	1
[	**U**	**238**	**0.733**	ug/L	0.001	0	29	30721	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:17:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			681751	707916	0
[	**Be**	**9**	**0.679**	ug/L	0.018	2	8	1700	2
	C	**13**		ug/L			63994	91531	0
	Cl	**37**		ug/L			3532807	3715678	3
[>	**Sc**	**45**		ug/L			674505	759493	2
[	**V**	**51**	**26.274**	ug/L	0.338	1	6013	401839	1
[	**V-1**	**51**	**26.192**	ug/L	0.422	1	387	397489	0
[	**Cr**	**52**	**20.703**	ug/L	0.574	2	17778	288948	1
[	**Cr**	**53**	**20.583**	ug/L	0.814	3	210	31260	2
[	**Mn**	**55**	**1550.240**	ug/L	48.001	3	314	27721628	2
[	**Co**	**59**	**8.053**	ug/L	0.252	3	73	110491	2
[>	**Ge**	**72**		ug/L			426798	419774	0
[	**Ni**	**60**	**29.091**	ug/L	1.208	4	26	76141	4
[	**Ni**	**62**	**31.009**	ug/L	1.240	3	48	11595	4
[	**Cu**	**63**	**16.437**	ug/L	0.242	1	88	96652	2
[	**Cu**	**65**	**16.833**	ug/L	0.366	2	42	44459	2
[	**Zn**	**66**	**132.794**	ug/L	2.558	1	141	203787	2
[	**Zn**	**67**	**136.357**	ug/L	1.006	0	21	35310	1
[	**Zn**	**68**	**137.506**	ug/L	2.163	1	144	152707	2
[	**As**	**75**	**21.115**	ug/L	0.121	0	220	30198	0
[	**As-1**	**75**	**21.012**	ug/L	0.079	0	9153	38933	0
[	**Se**	**82**	**-0.379**	ug/L	0.117	30	-1	-60	30
[	**Se**	**78**	**0.201**	ug/L	0.205	101	9315	9243	1
[	**Mo**	**98**	**0.435**	ug/L	0.010	2	35	1646	1
	Y	**89**		ug/L			271155	337104	1
	Kr	**83**		ug/L			529	876	4
[>	**In**	**115**		ug/L			840042	844861	1
[	**Ag**	**107**	**0.143**	ug/L	0.002	1	32	1609	2
[	**Cd**	**111**	**1.620**	ug/L	0.013	0	72	6891	1
[	**Cd**	**114**	**1.463**	ug/L	0.042	2	44	15341	2
[	**Sb**	**121**	**0.106**	ug/L	0.003	2	346	1723	3
[	**Sb**	**123**	**0.105**	ug/L	0.012	11	257	1295	8
[	**Ba**	**135**	**259.359**	ug/L	3.592	1	17	985399	1
[	**Ba**	**137**	**260.680**	ug/L	6.338	2	19	1713063	1
[>	**Tb**	**159**		ug/L			1001666	1000018	1
[	**Tl**	**205**	**0.177**	ug/L	0.001	0	206	5736	2
[	**Pb**	**208**	**84.535**	ug/L	0.599	0	157	3384856	1
[	**Bi**	**209**		ug/L			2293546	2210273	1
[	**Th**	**232**	**3.850**	ug/L	0.021	0	1512	149608	1
[	**U**	**238**	**0.496**	ug/L	0.003	0	29	20517	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 K SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:22:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	703860	0
	Be	9	0.681	ug/L	0.005	0	8	1695	0
	C	13		ug/L			63994	96598	0
	Cl	37		ug/L			3532807	3552616	0
>	Sc	45		ug/L			674505	762937	2
	V	51	25.187	ug/L	1.220	4	6013	386982	2
	V-1	51	25.085	ug/L	1.238	4	387	382203	2
	Cr	52	16.832	ug/L	0.431	2	17778	239745	1
	Cr	53	16.725	ug/L	0.427	2	210	25563	0
	Mn	55	926.230	ug/L	34.807	3	314	16631158	1
	Co	59	6.191	ug/L	0.195	3	73	85321	0
>	Ge	72		ug/L			426798	419352	1
	Ni	60	19.378	ug/L	0.309	1	26	50659	1
	Ni	62	20.963	ug/L	0.573	2	48	7843	1
	Cu	63	15.238	ug/L	0.387	2	88	89491	1
	Cu	65	15.637	ug/L	0.136	0	42	41253	1
	Zn	66	147.729	ug/L	1.213	0	141	226439	1
	Zn	67	147.844	ug/L	1.835	1	21	38239	0
	Zn	68	151.463	ug/L	5.099	3	144	167952	1
	As	75	12.463	ug/L	0.282	2	220	17890	0
	As-1	75	12.437	ug/L	0.420	3	9153	26683	0
	Se	82	-0.138	ug/L	0.187	135	-1	-23	125
	Se	78	0.321	ug/L	0.565	176	9315	9278	0
	Mo	98	0.549	ug/L	0.019	3	35	2068	2
	Y	89		ug/L			271155	350282	1
	Kr	83		ug/L			529	728	7
>	In	115		ug/L			840042	850262	0
	Ag	107	0.190	ug/L	0.007	3	32	2135	2
	Cd	111	1.580	ug/L	0.017	1	72	6766	0
	Cd	114	1.442	ug/L	0.032	2	44	15218	1
	Sb	121	0.086	ug/L	0.002	2	346	1471	1
	Sb	123	0.085	ug/L	0.002	2	257	1106	1
	Ba	135	197.434	ug/L	2.916	1	17	754941	1
	Ba	137	197.275	ug/L	1.656	0	19	1304863	0
>	Tb	159		ug/L			1001666	1013813	1
	Tl	205	0.142	ug/L	0.004	2	206	4727	2
	Pb	208	62.224	ug/L	0.839	1	157	2525765	0
	Bi	209		ug/L			2293546	2206898	0
	Th	232	3.660	ug/L	0.039	1	1512	144241	0
	U	238	1.343	ug/L	0.032	2	29	56251	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR30 L SWN
Sample Dil Factor: 20
Comments: Be
Sample Date/Time: Friday, November 16, 2012 17:26:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	693496	1
[	Be	9	0.640	ug/L	0.010	1	8	1571	0
	C	13		ug/L			63994	102486	1
	Cl	37		ug/L			3532807	3639665	2
[>	Sc	45		ug/L			674505	751325	3
[	V	51	21.332	ug/L	0.573	2	6013	323900	1
[	V-1	51	21.291	ug/L	0.640	3	387	319596	0
[	Cr	52	13.338	ug/L	0.460	3	17778	191161	1
[	Cr	53	13.414	ug/L	0.668	4	210	20224	2
[	Mn	55	1206.813	ug/L	62.140	5	314	21333427	2
[	Co	59	5.599	ug/L	0.294	5	73	75962	2
[>	Ge	72		ug/L			426798	434648	1
[	Ni	60	12.429	ug/L	0.387	3	26	33691	2
[	Ni	62	13.580	ug/L	0.218	1	48	5285	2
[	Cu	63	13.421	ug/L	0.129	0	88	81720	1
[	Cu	65	13.972	ug/L	0.045	0	42	38214	1
[	Zn	66	141.648	ug/L	5.155	3	141	225005	2
[	Zn	67	151.552	ug/L	3.689	2	21	40632	2
[	Zn	68	151.843	ug/L	7.046	4	144	174524	3
[	As	75	9.977	ug/L	0.085	0	220	14892	0
[	As-1	75	9.784	ug/L	0.170	1	9153	23749	0
[	Se	82	-0.022	ug/L	0.032	147	-1	-5	96
[	Se	78	-0.324	ug/L	0.389	119	9315	9351	0
[	Mo	98	0.259	ug/L	0.011	4	35	1031	4
	Y	89		ug/L			271155	357586	0
	Kr	83		ug/L			529	681	0
[>	In	115		ug/L			840042	845748	1
[	Ag	107	0.085	ug/L	0.005	5	32	969	6
[	Cd	111	1.924	ug/L	0.026	1	72	8176	0
[	Cd	114	1.824	ug/L	0.008	0	44	19144	0
[	Sb	121	0.159	ug/L	0.003	2	346	2415	2
[	Sb	123	0.155	ug/L	0.001	0	257	1788	1
[	Ba	135	378.155	ug/L	3.929	1	17	1438227	0
[	Ba	137	393.247	ug/L	3.692	0	19	2587146	0
[>	Tb	159		ug/L			1001666	1020200	0
[	Tl	205	0.148	ug/L	0.004	2	206	4951	1
[	Pb	208	75.614	ug/L	0.482	0	157	3088791	0
[	Bi	209		ug/L			2293546	2244736	0
[	Th	232	3.324	ug/L	0.015	0	1512	131969	0
[	U	238	0.726	ug/L	0.011	1	29	30599	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:31:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	681494 ✓	1
[	Be	9	50.478	ug/L	0.254	0	8	121123	1
	C	13		ug/L			63994	67045	1
	Cl	37		ug/L			3532807	3776792	1
[>	Sc	45		ug/L			674505	708035 ✓	0
[	V	51	47.413	ug/L	0.286	0	6013	671036	0
[	V-1	51	47.367	ug/L	0.481	1	387	669938	0
[	Cr	52	47.507	ug/L	0.727	1	17778	594188	2
[	Cr	53	47.355	ug/L	0.526	1	210	66792	0
[	Mn	55	47.753	ug/L	0.279	0	314	796580	1
[	Co	59	47.195	ug/L	1.375	2	73	603470	3
[>	Ge	72		ug/L			426798	418703 ✓	0
[	Ni	60	50.083	ug/L	0.352	0	26	130712	1
[	Ni	62	49.172	ug/L	0.666	1	48	18311	2
[	Cu	63	51.258	ug/L	1.704	3	88	300380	2
[	Cu	65	50.943	ug/L	0.075	0	42	134110	0
[	Zn	66	49.953	ug/L	0.540	1	141	76543	0
[	Zn	67	50.112	ug/L	1.717	3	21	12956	3
[	Zn	68	50.325	ug/L	1.512	3	144	55828	2
[	As	75	50.747	ug/L	0.631	1	220	72081	0
[	As-1	75	50.464	ug/L	0.690	1	9153	80672	0
[	Se	82	51.650	ug/L	0.146	0	-1	8023	0
[	Se	78	50.630	ug/L	0.458	0	9315	29371	0
[	Mo	98	52.332	ug/L	0.824	1	35	193482	1
	Y	89		ug/L			271155	268633	1
	Kr	83		ug/L			529	547	4
[>	In	115		ug/L			840042	819510 ✓	0
[	Ag	107	52.858	ug/L	0.923	1	32	565220	1
[	Cd	111	50.291	ug/L	0.330	0	72	205379	0
[	Cd	114	50.402	ug/L	0.169	0	44	511354	0
[	Sb	121	50.420	ug/L	0.100	0	346	634186	0
[	Sb	123	50.220	ug/L	0.180	0	257	479663	0
[	Ba	135	49.606	ug/L	0.538	1	17	182840	0
[	Ba	137	49.400	ug/L	0.471	0	19	314952	0
[>	Tb	159		ug/L			1001666	996761 ✓	0
[	Tl	205	48.390	ug/L	0.396	0	206	1511241	0
[	Pb	208	49.165	ug/L	0.377	0	157	1962289	0
[	Bi	209		ug/L			2293546	2188755	0
[	Th	232	47.439	ug/L	0.568	1	1512	1820219	1
[	U	238	47.871	ug/L	0.092	0	29	1970232	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 17:37:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	669220 ✓	1
	Be	9	0.001	ug/L	0.002	125	8	12	36
	C	13		ug/L			63994	64513	1
	Cl	37		ug/L			3532807	3655930	4
>	Sc	45		ug/L			674505	670359 ✓	3
	V	51	-0.022	ug/L	0.011	51	6013	5686	3
	V-1	51	-0.020	ug/L	0.000	1	387	114	6
	Cr	52	-0.075	ug/L	0.035	46	17778	16797	2
	Cr	53	-0.069	ug/L	0.008	10	210	116	6
	Mn	55	0.003	ug/L	0.001	45	314	358	2
	Co	59	-0.000	ug/L	0.001	509	73	71	6
>	Ge	72		ug/L			426798	415373 ✓	1
	Ni	60	-0.001	ug/L	0.001	114	26	23	8
	Ni	62	0.011	ug/L	0.008	74	48	51	6
	Cu	63	-0.000	ug/L	0.001	335	88	84	6
	Cu	65	-0.004	ug/L	0.003	92	42	31	26
	Zn	66	-0.005	ug/L	0.010	200	141	130	12
	Zn	67	0.014	ug/L	0.023	164	21	24	23
	Zn	68	-0.010	ug/L	0.005	52	144	129	5
	As	75	0.017	ug/L	0.020	119	220	237	10
	As-1	75	0.129	ug/L	0.102	78	9153	9089	0
	Se	82	-0.044	ug/L	0.030	67	-1	-8	53
	Se	78	0.412	ug/L	0.342	83	9315	9228	0
	Mo	98	0.003	ug/L	0.001	28	35	45	5
	Y	89		ug/L			271155	259185	1
	Kr	83		ug/L			529	543	2
>	In	115		ug/L			840042	821372 ✓	0
	Ag	107	-0.000	ug/L	0.000	70	32	28	10
	Cd	111	0.001	ug/L	0.001	133	72	74	5
	Cd	114	-0.001	ug/L	0.001	177	44	38	23
	Sb	121	0.033	ug/L	0.006	17	346	758	8
	Sb	123	0.037	ug/L	0.005	12	257	607	6
	Ba	135	-0.000	ug/L	0.001	290	17	15	29
	Ba	137	0.001	ug/L	0.000	54	19	22	9
>	Tb	159		ug/L			1001666	962148 ✓	0
	Tl	205	0.005	ug/L	0.005	97	206	343	41
	Pb	208	0.001	ug/L	0.000	16	157	194	3
	Bi	209		ug/L			2293546	2222751	0
	Th	232	0.054	ug/L	0.004	6	1512	3435	4
	U	238	0.001	ug/L	0.000	3	29	60	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 17:43:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	687193	1
	Be	9	0.168	ug/L	0.008	4	8	414	3
	C	13		ug/L			63994	70880	2
	Cl	37		ug/L			3532807	3544444	1
>	Sc	45		ug/L			674505	717250	2
	V	51	5.507	ug/L	0.162	2	6013	84569	1
	V-1	51	5.476	ug/L	0.198	3	387	78772	1
	Cr	52	6.338	ug/L	0.301	4	17778	96656	3
	Cr	53	6.216	ug/L	0.352	5	210	9068	3
	Mn	55	237.587	ug/L	7.866	3	314	4010869	0
	Co	59	1.788	ug/L	0.086	4	73	23211	1
>	Ge	72		ug/L			426798	426580	0
	Ni	60	6.489	ug/L	0.229	3	26	17277	4
	Ni	62	6.712	ug/L	0.131	1	48	2587	0
	Cu	63	3.596	ug/L	0.034	0	88	21555	1
	Cu	65	3.811	ug/L	0.110	2	42	10259	3
	Zn	66	43.598	ug/L	0.731	1	141	68078	1
	Zn	67	45.714	ug/L	0.885	1	21	12045	2
	Zn	68	45.831	ug/L	0.318	0	144	51817	1
	As	75	3.359	ug/L	0.036	1	220	5066	1
	As-1	75	3.273	ug/L	0.016	0	9153	13886	1
	Se	82	-0.033	ug/L	0.089	265	-1	-7	195
	Se	78	-0.201	ug/L	0.134	66	9315	9229	1
	Mo	98	0.108	ug/L	0.006	5	35	442	5
	Y	89		ug/L			271155	298881	1
	Kr	83		ug/L			529	578	4
>	In	115		ug/L			840042	842039	0
	Ag	107	0.043	ug/L	0.003	7	32	509	7
	Cd	111	0.467	ug/L	0.014	3	72	2029	2
	Cd	114	0.432	ug/L	0.011	2	44	4544	2
	Sb	121	0.009	ug/L	0.003	30	346	459	8
	Sb	123	0.009	ug/L	0.003	28	257	349	8
	Ba	135	79.416	ug/L	1.180	1	17	300727	0
	Ba	137	79.385	ug/L	1.115	1	19	519993	0
>	Tb	159		ug/L			1001666	999246	0
	Tl	205	0.038	ug/L	0.003	7	206	1382	6
	Pb	208	12.334	ug/L	0.064	0	157	493622	0
	Bi	209		ug/L			2293546	2297978	0
	Th	232	1.097	ug/L	0.014	1	1512	43685	1
	U	238	0.135	ug/L	0.003	2	29	5602	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:47:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			681751	693854	0
	Be	**9**	**0.826**	ug/L	0.016	1	8	2027	1
	C	**13**		ug/L			63994	86528	2
	Cl	**37**		ug/L			3532807	3635492	0
>	**Sc**	**45**		ug/L			674505	774098	1
	V	**51**	**24.870**	ug/L	0.527	2	6013	388042	0
	V-1	**51**	**24.775**	ug/L	0.466	1	387	383275	0
	Cr	**52**	**28.401**	ug/L	0.420	1	17778	396511	0
	Cr	**53**	**28.004**	ug/L	0.318	1	210	43281	0
	Mn	**55**	**1071.980**	ug/L	30.317	2	314	19537978	1
	Co	**59**	**8.144**	ug/L	0.057	0	73	113920	0
>	**Ge**	**72**		ug/L			426798	414641	2
	Ni	**60**	**31.796**	ug/L	0.366	1	26	82192	3
	Ni	**62**	**33.677**	ug/L	0.241	0	48	12434	2
	Cu	**63**	**17.698**	ug/L	0.064	0	88	102775	2
	Cu	**65**	**18.245**	ug/L	0.354	1	42	47577	0
	Zn	**66**	**213.308**	ug/L	6.657	3	141	323136	2
	Zn	**67**	**215.090**	ug/L	7.057	3	21	54992	3
	Zn	**68**	**220.438**	ug/L	5.108	2	144	241630	0
	As	**75**	**16.619**	ug/L	0.476	2	220	23512	0
	As-1	**75**	**16.588**	ug/L	0.623	3	9153	32217	0
	Se	**82**	**-0.279**	ug/L	0.089	32	-1	-44	28
	Se	**78**	**0.589**	ug/L	0.515	87	9315	9280	0
	Mo	**98**	**0.589**	ug/L	0.013	2	35	2192	1
	Y	**89**		ug/L			271155	382213	0
	Kr	**83**		ug/L			529	908	1
>	**In**	**115**		ug/L			840042	818109	1
	Ag	**107**	**0.218**	ug/L	0.011	5	32	2361	4
	Cd	**111**	**2.285**	ug/L	0.022	0	72	9382	1
	Cd	**114**	**2.075**	ug/L	0.026	1	44	21059	0
	Sb	**121**	**0.059**	ug/L	0.004	7	346	1081	3
	Sb	**123**	**0.060**	ug/L	0.006	9	257	821	6
	Ba	**135**	**410.338**	ug/L	7.294	1	17	1509548	0
	Ba	**137**	**425.096**	ug/L	12.310	2	19	2704924	1
>	**Tb**	**159**		ug/L			1001666	1015216	0
	Tl	**205**	**0.179**	ug/L	0.001	0	206	5917	0
	Pb	**208**	**59.035**	ug/L	0.411	0	157	2399917	1
	Bi	**209**		ug/L			2293546	2168252	0
	Th	**232**	**5.233**	ug/L	0.073	1	1512	205855	1
	U	**238**	**0.650**	ug/L	0.012	1	29	27289	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:51:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	696466	1
[	Be	9	0.851	ug/L	0.004	0	8	2095	0
	C	13		ug/L			63994	89380	2
	Cl	37		ug/L			3532807	3710422	4
[>	Sc	45		ug/L			674505	773543	0
[	V	51	28.646	ug/L	0.385	1	6013	445644	0
[	V-1	51	28.691	ug/L	0.508	1	387	443490	1
[	Cr	52	28.597	ug/L	0.150	0	17778	398847	0
[	Cr	53	28.740	ug/L	0.477	1	210	44380	1
[	Mn	55	1002.278	ug/L	24.879	2	314	18256924	2
[	Co	59	8.286	ug/L	0.131	1	73	115817	1
[>	Ge	72		ug/L			426798	413110	2
[	Ni	60	32.753	ug/L	0.835	2	26	84311	0
[	Ni	62	34.803	ug/L	1.054	3	48	12793	0
[	Cu	63	17.806	ug/L	0.336	1	88	102998	1
[	Cu	65	18.622	ug/L	0.465	2	42	48375	0
[	Zn	66	207.890	ug/L	3.232	1	141	313798	0
[	Zn	67	213.433	ug/L	4.050	1	21	54376	2
[	Zn	68	213.661	ug/L	9.000	4	144	233271	2
[	As	75	15.927	ug/L	0.354	2	220	22461	1
[	As-1	75	15.885	ug/L	0.480	3	9153	31117	1
[	Se	82	-0.326	ug/L	0.082	25	-1	-51	26
[	Se	78	0.459	ug/L	0.584	127	9315	9194	0
[	Mo	98	0.645	ug/L	0.010	1	35	2388	2
	Y	89		ug/L			271155	386689	0
	Kr	83		ug/L			529	885	2
[>	In	115		ug/L			840042	825771	1
[	Ag	107	0.209	ug/L	0.009	4	32	2284	4
[	Cd	111	2.067	ug/L	0.042	2	72	8576	2
[	Cd	114	1.887	ug/L	0.026	1	44	19330	1
[	Sb	121	0.047	ug/L	0.005	10	346	934	7
[	Sb	123	0.046	ug/L	0.005	10	257	694	5
[	Ba	135	380.281	ug/L	6.198	1	17	1412093	0
[	Ba	137	399.744	ug/L	4.943	1	19	2567712	0
[>	Tb	159		ug/L			1001666	1006257	1
[	Tl	205	0.175	ug/L	0.005	2	206	5719	2
[	Pb	208	54.177	ug/L	0.422	0	157	2182863	0
[	Bi	209		ug/L			2293546	2164915	0
[	Th	232	5.547	ug/L	0.075	1	1512	216201	0
[	U	238	0.640	ug/L	0.020	3	29	26607	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:55:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	680581	1
[	Be	9	26.375	ug/L	0.875	3	8	63180	1
	C	13		ug/L			63994	82584	2
	Cl	37		ug/L			3532807	3706048	3
[>	Sc	45		ug/L			674505	775277	1
[	V	51	55.472	ug/L	2.033	3	6013	858255	2
[	V-1	51	54.941	ug/L	1.972	3	387	850572	2
[	Cr	52	55.749	ug/L	1.283	2	17778	759809	1
[	Cr	53	54.033	ug/L	1.125	2	210	83401	1
[	Mn	55	1045.642	ug/L	29.330	2	314	19086214	1
[	Co	59	32.850	ug/L	0.857	2	73	459821	0
[>	Ge	72		ug/L			426798	415192	1
[	Ni	60	60.690	ug/L	2.149	3	26	157008	2
[	Ni	62	61.729	ug/L	0.728	1	48	22779	1
[	Cu	63	45.538	ug/L	0.580	1	88	264648	0
[	Cu	65	45.530	ug/L	1.274	2	42	118830	1
[	Zn	66	287.740	ug/L	2.874	0	141	436535	0
[	Zn	67	287.092	ug/L	16.511	5	21	73470	4
[	Zn	68	291.942	ug/L	3.280	1	144	320472	0
[	As	75	42.258	ug/L	0.287	0	220	59557	0
[	As-1	75	41.856	ug/L	0.516	1	9153	67866	0
[	Se	82	79.745	ug/L	1.510	1	-1	12282	1
[	Se	78	78.562	ug/L	2.250	2	9315	40186	0
[	Mo	98	24.644	ug/L	0.862	3	35	90345	2
	Y	89		ug/L			271155	398412	2
	Kr	83		ug/L			529	897	5
[>	In	115		ug/L			840042	828567	0
[	Ag	107	25.421	ug/L	0.057	0	32	274847	0
[	Cd	111	26.939	ug/L	0.875	3	72	111244	2
[	Cd	114	26.775	ug/L	0.573	2	44	274647	1
[	Sb	121	1.282	ug/L	0.029	2	346	16633	1
[	Sb	123	1.262	ug/L	0.034	2	257	12429	2
[	Ba	135	415.609	ug/L	6.093	1	17	1548600	1
[	Ba	137	430.426	ug/L	10.663	2	19	2774184	2
[>	Tb	159		ug/L			1001666	995251	1
[	Tl	205	25.279	ug/L	0.680	2	206	788150	0
[	Pb	208	82.892	ug/L	1.954	2	157	3302556	0
[	Bi	209		ug/L			2293546	2161201	0
[	Th	232	31.602	ug/L	0.472	1	1512	1211013	0
[	U	238	25.556	ug/L	0.868	3	29	1049846	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 17:59:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	702019	0
	Be	9	0.507	ug/L	0.014	2	8	1262	2
	C	13		ug/L			63994	96699	2
	Cl	37		ug/L			3532807	3730940	1
>	Sc	45		ug/L			674505	770961	0
	V	51	26.494	ug/L	0.562	2	6013	411267	1
	V-1	51	26.331	ug/L	0.579	2	387	405664	1
	Cr	52	16.313	ug/L	0.123	0	17778	235496	0
	Cr	53	16.058	ug/L	0.132	0	210	24819	0
	Mn	55	1292.245	ug/L	2.744	0	314	23462329	1
	Co	59	6.522	ug/L	0.042	0	73	90875	0
>	Ge	72		ug/L			426798	428537	1
	Ni	60	13.547	ug/L	0.216	1	26	36200	0
	Ni	62	14.987	ug/L	0.147	0	48	5744	0
	Cu	63	16.907	ug/L	0.253	1	88	101471	0
	Cu	65	17.333	ug/L	0.278	1	42	46723	0
	Zn	66	270.878	ug/L	6.186	2	141	424130	1
	Zn	67	257.991	ug/L	4.688	1	21	68181	2
	Zn	68	268.809	ug/L	7.175	2	144	304530	1
	As	75	18.363	ug/L	0.380	2	220	26835	1
	As-1	75	18.155	ug/L	0.433	2	9153	35586	0
	Se	82	-0.080	ug/L	0.059	73	-1	-14	65
	Se	78	-0.222	ug/L	0.444	199	9315	9261	0
	Mo	98	0.477	ug/L	0.019	3	35	1841	3
	Y	89		ug/L			271155	354333	0
	Kr	83		ug/L			529	730	0
>	In	115		ug/L			840042	856157	0
	Ag	107	0.139	ug/L	0.003	1	32	1582	1
	Cd	111	5.438	ug/L	0.071	1	72	23268	1
	Cd	114	5.230	ug/L	0.044	0	44	55471	1
	Sb	121	0.330	ug/L	0.006	1	346	4686	1
	Sb	123	0.326	ug/L	0.003	0	257	3510	1
	Ba	135	336.767	ug/L	2.499	0	17	1296659	0
	Ba	137	352.231	ug/L	2.215	0	19	2346031	0
>	Tb	159		ug/L			1001666	1014171	0
	Tl	205	0.316	ug/L	0.006	1	206	10260	1
	Pb	208	252.059	ug/L	0.815	0	157	10235558	0
	Bi	209		ug/L			2293546	2213987	0
	Th	232	5.356	ug/L	0.046	0	1512	210435	0
	U	238	0.504	ug/L	0.007	1	29	21115	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:03:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	699804	1
	Be	9	0.682	ug/L	0.006	0	8	1690	1
	C	13		ug/L			63994	92616	1
	Cl	37		ug/L			3532807	3636508	4
>	Sc	45		ug/L			674505	764826	1
	V	51	23.347	ug/L	0.458	1	6013	360336	1
	V-1	51	23.223	ug/L	0.409	1	387	354992	1
	Cr	52	20.417	ug/L	0.614	3	17778	287232	1
	Cr	53	20.096	ug/L	0.428	2	210	30748	0
	Mn	55	731.786	ug/L	3.099	0	314	13180330	1
	Co	59	6.188	ug/L	0.166	2	73	85528	1
>	Ge	72		ug/L			426798	419639	2
	Ni	60	20.521	ug/L	1.092	5	26	53654	3
	Ni	62	22.422	ug/L	0.898	4	48	8389	2
	Cu	63	18.903	ug/L	0.696	3	88	111039	1
	Cu	65	18.932	ug/L	0.528	2	42	49962	1
	Zn	66	87.481	ug/L	0.452	0	141	134242	1
	Zn	67	100.849	ug/L	4.617	4	21	26095	2
	Zn	68	95.448	ug/L	2.852	2	144	105968	1
	As	75	7.045	ug/L	0.108	1	220	10214	0
	As-1	75	6.974	ug/L	0.299	4	9153	18924	0
	Se	82	-0.217	ug/L	0.179	82	-1	-35	76
	Se	78	0.254	ug/L	0.622	244	9315	9257	0
	Mo	98	0.422	ug/L	0.013	3	35	1599	0
	Y	89		ug/L			271155	401084	1
	Kr	83		ug/L			529	844	2
>	In	115		ug/L			840042	833821	0
	Ag	107	0.165	ug/L	0.002	0	32	1824	1
	Cd	111	0.748	ug/L	0.029	3	72	3177	4
	Cd	114	0.582	ug/L	0.013	2	44	6049	1
	Sb	121	0.031	ug/L	0.001	3	346	733	2
	Sb	123	0.031	ug/L	0.004	11	257	553	6
	Ba	135	309.282	ug/L	4.913	1	17	1159821	1
	Ba	137	330.660	ug/L	3.618	1	19	2144803	0
>	Tb	159		ug/L			1001666	1006288	1
	Tl	205	0.131	ug/L	0.005	3	206	4347	1
	Pb	208	31.927	ug/L	0.386	1	157	1286391	0
	Bi	209		ug/L			2293546	2208778	0
	Th	232	5.350	ug/L	0.125	2	1512	208547	1
	U	238	1.099	ug/L	0.028	2	29	45670	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:09:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	683053	1
	Be	9	0.475	ug/L	0.022	4	8	1151	3
	C	13		ug/L			63994	91355	4
	Cl	37		ug/L			3532807	3543080	1
>	Sc	45		ug/L			674505	768193	0
	V	51	17.593	ug/L	0.255	1	6013	274444	1
	V-1	51	17.490	ug/L	0.178	1	387	268676	0
	Cr	52	11.830	ug/L	0.151	1	17778	175725	0
	Cr	53	11.652	ug/L	0.108	0	210	18012	1
	Mn	55	1085.447	ug/L	30.994	2	314	19634743	2
	Co	59	4.449	ug/L	0.007	0	73	61796	0
>	Ge	72		ug/L			426798	426741	0
	Ni	60	13.750	ug/L	0.465	3	26	36589	3
	Ni	62	14.977	ug/L	0.167	1	48	5717	0
	Cu	63	10.315	ug/L	0.242	2	88	61692	2
	Cu	65	10.801	ug/L	0.129	1	42	29013	1
	Zn	66	153.889	ug/L	1.972	1	141	240035	0
	Zn	67	164.315	ug/L	1.465	0	21	43250	0
	Zn	68	163.951	ug/L	0.952	0	144	185055	0
	As	75	6.360	ug/L	0.100	1	220	9400	1
	As-1	75	6.321	ug/L	0.138	2	9153	18304	0
	Se	82	-0.247	ug/L	0.067	26	-1	-41	25
	Se	78	0.141	ug/L	0.378	267	9315	9371	0
	Mo	98	0.363	ug/L	0.005	1	35	1405	1
	Y	89		ug/L			271155	344364	0
	Kr	83		ug/L			529	761	0
>	In	115		ug/L			840042	836141	1
	Ag	107	0.152	ug/L	0.002	1	32	1691	0
	Cd	111	1.584	ug/L	0.053	3	72	6667	2
	Cd	114	1.405	ug/L	0.015	1	44	14588	0
	Sb	121	0.041	ug/L	0.004	8	346	869	4
	Sb	123	0.042	ug/L	0.005	12	257	667	6
	Ba	135	421.825	ug/L	10.568	2	17	1585933	1
	Ba	137	437.199	ug/L	10.947	2	19	2843466	1
>	Tb	159		ug/L			1001666	1004811	0
	Tl	205	0.137	ug/L	0.000	0	206	4509	0
	Pb	208	66.063	ug/L	0.037	0	157	2658019	0
	Bi	209		ug/L			2293546	2229660	0
	Th	232	3.598	ug/L	0.038	1	1512	140580	1
	U	238	0.425	ug/L	0.003	0	29	17673	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 E SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, November 16, 2012 18:13:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be 11.19.12 MJ

V Cr Co

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	689491	2
[	Be	9	~0.192	ug/L	0.018	9	8	475	7
	C	13		ug/L			63994	71114	3
	Cl	37		ug/L			3532807	3716722	1
[>	Sc	45		ug/L			674505	771845 ✓	1
[	V	51	7.326	ug/L	0.138	1	6013	118836	0
[	V-1	51	7.311	ug/L	0.140	1	387	113083	0
[	Cr	52	12.900	ug/L	0.316	2	17778	190669	1
[	Cr	53	12.704	ug/L	0.261	2	210	19705	0
[	Mn	55	281.131	ug/L	9.092	3	314	5108906	1
[	Co	59	2.239	ug/L	0.039	1	73	31283	0
[>	Ge	72		ug/L			426798	433626	2
[	Ni	60	12.323	ug/L	0.414	3	26	33323	3
[	Ni	62	12.738	ug/L	0.481	3	48	4946	2
[	Cu	63	4.863	ug/L	0.118	2	88	29597	2
[	Cu	65	4.819	ug/L	0.118	2	42	13173	0
[	Zn	66	60.166	ug/L	0.862	1	141	95434	0
[	Zn	67	60.297	ug/L	2.643	4	21	16131	2
[	Zn	68	62.739	ug/L	2.178	3	144	72015	1
[	As	75	3.309	ug/L	0.079	2	220	5076	0
[	As-1	75	3.238	ug/L	0.171	5	9153	14060	0
[	Se	82	-0.062	ug/L	0.035	56	-1	-11	47
[	Se	78	-0.157	ug/L	0.345	219	9315	9397	0
[	Mo	98	0.113	ug/L	0.003	2	35	469	3
	Y	89		ug/L			271155	303515	2
	Kr	83		ug/L			529	600	2
[>	In	115		ug/L			840042	848102	0
[	Ag	107	0.041	ug/L	0.001	2	32	482	2
[	Cd	111	0.870	ug/L	0.019	2	72	3747	2
[	Cd	114	0.829	ug/L	0.015	1	44	8752	1
[	Sb	121	-0.009	ug/L	0.002	19	346	235	9
[	Sb	123	-0.006	ug/L	0.003	44	257	202	12
[	Ba	135	90.548	ug/L	0.713	0	17	345368	0
[	Ba	137	90.748	ug/L	0.235	0	19	598744	0
[>	Tb	159		ug/L			1001666	1009506	0
[	Tl	205	0.044	ug/L	0.003	6	206	1615	4
[	Pb	208	37.424	ug/L	0.565	1	157	1512739	0
[	Bi	209		ug/L			2293546	2314325	1
[	Th	232	1.119	ug/L	0.009	0	1512	44989	1
[	U	238	0.107	ug/L	0.002	1	29	4492	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 F SWN

Be

Sample Dil Factor: 20

Comments:

Sample Date/Time: Friday, November 16, 2012 18:17:25

Number of Replicates: 3

Method File: C:\NexION Data\Method\200.8nomin.mth

Tuning File: C:\NexION Data\MassCal\Default.tun

Optimization File: C:\NexION Data\Conditions\Default.dac

Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	690479	0
	Be	9	0.496	ug/L	0.017	3	8	1213	3
	C	13		ug/L			63994	94476	4
	Cl	37		ug/L			3532807	3715063	3
>	Sc	45		ug/L			674505	773058	1
	V	51	18.987	ug/L	0.578	3	6013	297445	1
	V-1	51	18.871	ug/L	0.626	3	387	291598	1
	Cr	52	12.527	ug/L	0.190	1	17778	186032	0
	Cr	53	12.324	ug/L	0.350	2	210	19151	1
	Mn	55	1031.025	ug/L	15.004	1	314	18772998	2
	Co	59	4.705	ug/L	0.111	2	73	65755	1
>	Ge	72		ug/L			426798	423249	1
	Ni	60	12.035	ug/L	0.277	2	26	31762	0
	Ni	62	13.159	ug/L	0.240	1	48	4987	2
	Cu	63	10.944	ug/L	0.426	3	88	64896	3
	Cu	65	11.275	ug/L	0.232	2	42	30028	0
	Zn	66	134.560	ug/L	3.056	2	141	208144	0
	Zn	67	142.372	ug/L	6.919	4	21	37150	3
	Zn	68	142.217	ug/L	3.697	2	144	159185	0
	As	75	13.991	ug/L	0.279	1	220	20244	1
	As-1	75	13.940	ug/L	0.380	2	9153	29091	0
	Se	82	-0.131	ug/L	0.038	28	-1	-22	27
	Se	78	0.241	ug/L	0.396	164	9315	9333	0
	Mo	98	0.502	ug/L	0.005	1	35	1911	1
	Y	89		ug/L			271155	356922	1
	Kr	83		ug/L			529	726	3
>	In	115		ug/L			840042	844972	0
	Ag	107	0.109	ug/L	0.009	7	32	1237	8
	Cd	111	1.755	ug/L	0.043	2	72	7459	2
	Cd	114	1.612	ug/L	0.019	1	44	16907	0
	Sb	121	0.087	ug/L	0.009	10	346	1469	8
	Sb	123	0.079	ug/L	0.002	2	257	1037	2
	Ba	135	289.768	ug/L	4.591	1	17	1101190	2
	Ba	137	293.057	ug/L	4.424	1	19	1926441	1
>	Tb	159		ug/L			1001666	1007825	1
	Tl	205	0.145	ug/L	0.002	1	206	4771	2
	Pb	208	76.275	ug/L	0.670	0	157	3078201	1
	Bi	209		ug/L			2293546	2216310	1
	Th	232	4.835	ug/L	0.054	1	1512	188936	1
	U	238	0.592	ug/L	0.007	1	29	24681	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:21:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	692772	3
[	Be	9	0.520	ug/L	0.032	6	8	1276	2
	C	13		ug/L			63994	88271	0
	Cl	37		ug/L			3532807	3731395	3
[>	Sc	45		ug/L			674505	785280	0
[	V	51	21.708	ug/L	0.166	0	6013	344533	0
[	V-1	51	21.718	ug/L	0.256	1	387	340922	0
[	Cr	52	15.145	ug/L	0.137	0	17778	224182	1
[	Cr	53	15.349	ug/L	0.409	2	210	24177	2
[	Mn	55	679.278	ug/L	9.300	1	314	12561412	0
[	Co	59	4.876	ug/L	0.045	0	73	69233	1
[>	Ge	72		ug/L			426798	430643	1
[	Ni	60	14.125	ug/L	0.336	2	26	37928	1
[	Ni	62	15.190	ug/L	0.460	3	48	5850	2
[	Cu	63	11.112	ug/L	0.190	1	88	67046	0
[	Cu	65	11.472	ug/L	0.236	2	42	31089	0
[	Zn	66	87.832	ug/L	0.509	0	141	138316	0
[	Zn	67	93.822	ug/L	0.621	0	21	24930	0
[	Zn	68	91.647	ug/L	2.414	2	144	104436	1
[	As	75	7.522	ug/L	0.097	1	220	11179	1
[	As-1	75	7.441	ug/L	0.134	1	9153	20107	0
[	Se	82	-0.180	ug/L	0.070	38	-1	-30	37
[	Se	78	0.081	ug/L	0.333	408	9315	9432	0
[	Mo	98	0.425	ug/L	0.007	1	35	1652	2
	Y	89		ug/L			271155	372721	2
	Kr	83		ug/L			529	775	2
[>	In	115		ug/L			840042	841096	0
[	Ag	107	0.092	ug/L	0.001	1	32	1043	1
[	Cd	111	0.735	ug/L	0.032	4	72	3151	4
[	Cd	114	0.591	ug/L	0.005	0	44	6200	0
[	Sb	121	0.030	ug/L	0.002	6	346	727	3
[	Sb	123	0.034	ug/L	0.012	34	257	591	19
[	Ba	135	209.450	ug/L	0.504	0	17	792283	0
[	Ba	137	209.497	ug/L	1.599	0	19	1370812	1
[>	Tb	159		ug/L			1001666	1017447	0
[	Tl	205	0.125	ug/L	0.001	0	206	4195	0
[	Pb	208	50.987	ug/L	0.673	1	157	2077098	0
[	Bi	209		ug/L			2293546	2231017	0
[	Th	232	4.816	ug/L	0.050	1	1512	189976	0
[	U	238	0.719	ug/L	0.007	1	29	30245	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:25:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	663575	0
[	Be	9	52.743	ug/L	0.935	1	8	123229	2
	C	13		ug/L			63994	69176	3
	Cl	37		ug/L			3532807	3843309	1
[>	Sc	45		ug/L			674505	724492	0
[	V	51	48.591	ug/L	1.223	2	6013	703551	2
[	V-1	51	48.465	ug/L	0.928	1	387	701432	2
[	Cr	52	47.789	ug/L	1.221	2	17778	611474	2
[	Cr	53	47.405	ug/L	0.816	1	210	68419	1
[	Mn	55	47.252	ug/L	0.723	1	314	806533	1
[	Co	59	47.132	ug/L	0.912	1	73	616655	1
[>	Ge	72		ug/L			426798	429076	0
[	Ni	60	50.553	ug/L	1.753	3	26	135205	3
[	Ni	62	49.714	ug/L	0.175	0	48	18969	0
[	Cu	63	49.403	ug/L	1.012	2	88	296716	1
[	Cu	65	50.065	ug/L	0.243	0	42	135062	0
[	Zn	66	49.452	ug/L	0.136	0	141	77659	0
[	Zn	67	49.757	ug/L	1.086	2	21	13182	1
[	Zn	68	49.166	ug/L	0.503	1	144	55899	0
[	As	75	50.486	ug/L	0.470	0	220	73491	0
[	As-1	75	50.123	ug/L	0.419	0	9153	82177	0
[	Se	82	51.083	ug/L	0.909	1	-1	8131	1
[	Se	78	49.804	ug/L	0.726	1	9315	29760	0
[	Mo	98	53.593	ug/L	0.499	0	35	203060	0
	Y	89		ug/L			271155	279740	2
	Kr	83		ug/L			529	572	0
[>	In	115		ug/L			840042	823632	1
[	Ag	107	54.286	ug/L	0.584	1	32	583362	1
[	Cd	111	51.115	ug/L	0.304	0	72	209803	1
[	Cd	114	50.350	ug/L	0.864	1	44	513328	0
[	Sb	121	50.242	ug/L	1.201	2	346	634982	1
[	Sb	123	50.390	ug/L	1.026	2	257	483622	0
[	Ba	135	49.254	ug/L	0.571	1	17	182436	0
[	Ba	137	48.955	ug/L	1.069	2	19	313631	1
[>	Tb	159		ug/L			1001666	987854	0
[	Tl	205	48.779	ug/L	0.798	1	206	1509723	1
[	Pb	208	49.981	ug/L	0.269	0	157	1977039	0
[	Bi	209		ug/L			2293546	2227711	0
[	Th	232	48.909	ug/L	0.466	0	1512	1859729	0
[	U	238	48.745	ug/L	0.174	0	29	1988258	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, November 16, 2012 18:32:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	664340	1
	Be	9	0.001	ug/L	0.001	105	8	11	30
	C	13		ug/L			63994	66827	2
	Cl	37		ug/L			3532807	3677611	5
>	Sc	45		ug/L			674505	686998	3
	V	51	-0.010	ug/L	0.011	109	6013	5989	1
	V-1	51	-0.022	ug/L	0.001	5	387	88	20
	Cr	52	-0.031	ug/L	0.036	113	17778	17730	1
	Cr	53	-0.071	ug/L	0.003	4	210	116	1
	Mn	55	0.007	ug/L	0.006	90	314	432	23
	Co	59	0.001	ug/L	0.002	248	73	85	30
>	Ge	72		ug/L			426798	413705	1
	Ni	60	-0.001	ug/L	0.001	91	26	21	16
	Ni	62	-0.004	ug/L	0.002	57	48	45	2
	Cu	63	0.002	ug/L	0.003	164	88	96	20
	Cu	65	-0.006	ug/L	0.001	11	42	24	6
	Zn	66	-0.003	ug/L	0.006	208	141	133	7
	Zn	67	0.015	ug/L	0.023	149	21	24	25
	Zn	68	-0.003	ug/L	0.019	550	144	135	14
	As	75	0.026	ug/L	0.020	78	220	249	9
	As-1	75	0.161	ug/L	0.101	62	9153	9097	0
	Se	82	0.020	ug/L	0.054	270	-1	1	617
	Se	78	0.558	ug/L	0.306	54	9315	9249	0
	Mo	98	0.003	ug/L	0.002	48	35	47	11
	Y	89		ug/L			271155	264161	1
	Kr	83		ug/L			529	542	5
>	In	115		ug/L			840042	811997	0
	Ag	107	0.002	ug/L	0.002	128	32	48	45
	Cd	111	0.003	ug/L	0.002	65	72	83	11
	Cd	114	0.000	ug/L	0.001	107	44	48	11
	Sb	121	0.035	ug/L	0.004	12	346	767	7
	Sb	123	0.034	ug/L	0.002	7	257	568	4
	Ba	135	0.001	ug/L	0.002	351	17	19	46
	Ba	137	0.002	ug/L	0.002	104	19	31	43
>	Tb	159		ug/L			1001666	953627	0
	Tl	205	0.007	ug/L	0.005	78	206	391	39
	Pb	208	0.002	ug/L	0.001	39	157	230	13
	Bi	209		ug/L			2293546	2258962	0
	Th	232	0.057	ug/L	0.004	6	1512	3520	3
	U	238	0.001	ug/L	0.001	61	29	70	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:38:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	686839	0
[	Be	9	0.003	ug/L	0.002	59	8	16	27
	C	13		ug/L			63994	72976	2
	Cl	37		ug/L			3532807	3652211	2
[>	Sc	45		ug/L			674505	703583	1
[	V	51	-0.001	ug/L	0.008	1236	6013	6262	0
[	V-1	51	-0.022	ug/L	0.001	2	387	89	8
[	Cr	52	0.005	ug/L	0.035	714	17778	18599	1
[	Cr	53	-0.065	ug/L	0.011	16	210	127	10
[	Mn	55	0.034	ug/L	0.003	7	314	888	3
[	Co	59	0.001	ug/L	0.001	42	73	92	8
[>	Ge	72		ug/L			426798	419923	0
[	Ni	60	0.015	ug/L	0.003	20	26	64	11
[	Ni	62	-0.010	ug/L	0.030	317	48	44	25
[	Cu	63	0.014	ug/L	0.003	23	88	169	11
[	Cu	65	0.012	ug/L	0.001	4	42	72	2
[	Zn	66	0.162	ug/L	0.007	4	141	388	3
[	Zn	67	0.151	ug/L	0.017	11	21	60	7
[	Zn	68	0.172	ug/L	0.017	9	144	332	5
[	As	75	-0.012	ug/L	0.009	76	220	199	6
[	As-1	75	0.160	ug/L	0.064	40	9153	9233	0
[	Se	82	-0.104	ug/L	0.054	51	-1	-17	46
[	Se	78	0.574	ug/L	0.211	36	9315	9395	0
[	Mo	98	-0.003	ug/L	0.001	39	35	24	18
	Y	89		ug/L			271155	265513	1
	Kr	83		ug/L			529	554	3
[>	In	115		ug/L			840042	821741	0
[	Ag	107	-0.000	ug/L	0.000	176	32	29	17
[	Cd	111	0.001	ug/L	0.002	171	72	77	13
[	Cd	114	-0.001	ug/L	0.000	26	44	36	5
[	Sb	121	-0.005	ug/L	0.003	64	346	269	15
[	Sb	123	-0.006	ug/L	0.002	40	257	195	11
[	Ba	135	0.016	ug/L	0.003	21	17	74	15
[	Ba	137	0.017	ug/L	0.003	18	19	124	15
[>	Tb	159		ug/L			1001666	969433	1
[	Tl	205	0.002	ug/L	0.003	110	206	272	28
[	Pb	208	0.015	ug/L	0.000	2	157	723	2
[	Bi	209		ug/L			2293546	2258791	0
[	Th	232	0.031	ug/L	0.009	30	1512	2628	13
[	U	238	-0.000	ug/L	0.000	314	29	25	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR33 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:42:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			681751	692347	1
[	Be	9	25.189	ug/L	0.569	2	8	61401	2
	C	13		ug/L			63994	69895	0
	Cl	37		ug/L			3532807	3738417	1
[>	Sc	45		ug/L			674505	727870	0
[	V	51	24.826	ug/L	0.585	2	6013	364300	2
[	V-1	51	24.470	ug/L	0.467	1	387	355996	1
[	Cr	52	25.226	ug/L	0.083	0	17778	333326	0
[	Cr	53	24.068	ug/L	0.298	1	210	35010	1
[	Mn	55	24.495	ug/L	0.246	1	314	420205	0
[	Co	59	24.270	ug/L	0.360	1	73	319068	1
[>	Ge	72		ug/L			426798	419155	0
[	Ni	60	26.653	ug/L	0.169	0	26	69648	1
[	Ni	62	27.259	ug/L	0.413	1	48	10181	0
[	Cu	63	27.174	ug/L	0.445	1	88	159496	2
[	Cu	65	27.729	ug/L	0.318	1	42	73096	1
[	Zn	66	85.743	ug/L	0.639	0	141	131435	1
[	Zn	67	76.008	ug/L	1.108	1	21	19661	0
[	Zn	68	83.383	ug/L	1.852	2	144	92511	2
[	As	75	26.066	ug/L	0.677	2	220	37175	3
[	As-1	75	25.996	ug/L	0.249	0	9153	45965	1
[	Se	82	83.279	ug/L	0.800	0	-1	12951	1
[	Se	78	82.373	ug/L	1.305	1	9315	42102	1
[	Mo	98	26.737	ug/L	0.153	0	35	98979	0
	Y	89		ug/L			271155	273890	1
	Kr	83		ug/L			529	566	5
[>	In	115		ug/L			840042	833854	1
[	Ag	107	28.336	ug/L	0.561	1	32	308301	1
[	Cd	111	25.239	ug/L	0.346	1	72	104902	0
[	Cd	114	24.893	ug/L	0.206	0	44	256986	0
[	Sb	121	24.724	ug/L	0.326	1	346	316572	0
[	Sb	123	24.823	ug/L	0.412	1	257	241339	0
[	Ba	135	25.164	ug/L	0.424	1	17	94373	0
[	Ba	137	24.992	ug/L	0.625	2	19	162110	1
[>	Tb	159		ug/L			1001666	997189	0
[	Tl	205	25.275	ug/L	0.300	1	206	789782	0
[	Pb	208	26.095	ug/L	0.258	0	157	1042066	0
[	Bi	209		ug/L			2293546	2294817	0
[	Th	232	24.269	ug/L	0.152	0	1512	932294	0
[	U	238	24.384	ug/L	0.170	0	29	1004012	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:46:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	705675	0
	Be	9	0.462	ug/L	0.004	0	8	1156	0
	C	13		ug/L			63994	93906	4
	Cl	37		ug/L			3532807	3746268	3
>	Sc	45		ug/L			674505	788247	0
	V	51	18.492	ug/L	0.617	3	6013	295636	3
	V-1	51	18.400	ug/L	0.536	2	387	289990	2
	Cr	52	12.479	ug/L	0.397	3	17778	189064	2
	Cr	53	12.340	ug/L	0.209	1	210	19558	1
	Mn	55	779.087	ug/L	22.091	2	314	14461718	2
	Co	59	4.281	ug/L	0.205	4	73	61014	4
>	Ge	72		ug/L			426798	423985	0
	Ni	60	11.919	ug/L	0.478	4	26	31517	3
	Ni	62	13.376	ug/L	0.675	5	48	5078	5
	Cu	63	9.736	ug/L	0.220	2	88	57858	2
	Cu	65	10.234	ug/L	0.044	0	42	27315	0
	Zn	66	60.295	ug/L	1.274	2	141	93528	1
	Zn	67	71.615	ug/L	1.144	1	21	18740	1
	Zn	68	67.089	ug/L	2.205	3	144	75326	3
	As	75	4.669	ug/L	0.062	1	220	6915	1
	As-1	75	4.742	ug/L	0.076	1	9153	15915	0
	Se	82	-0.042	ug/L	0.045	107	-1	-8	84
	Se	78	0.625	ug/L	0.094	14	9315	9507	0
	Mo	98	0.426	ug/L	0.006	1	35	1630	1
	Y	89		ug/L			271155	358473	1
	Kr	83		ug/L			529	708	1
>	In	115		ug/L			840042	833331	0
	Ag	107	0.100	ug/L	0.003	3	32	1125	3
	Cd	111	0.512	ug/L	0.018	3	72	2195	3
	Cd	114	0.396	ug/L	0.005	1	44	4131	1
	Sb	121	0.046	ug/L	0.004	7	346	926	5
	Sb	123	0.051	ug/L	0.006	12	257	747	8
	Ba	135	223.936	ug/L	0.180	0	17	839254	0
	Ba	137	226.700	ug/L	2.723	1	19	1469721	1
>	Tb	159		ug/L			1001666	1014310	0
	Tl	205	0.099	ug/L	0.002	1	206	3347	2
	Pb	208	20.900	ug/L	0.121	0	157	849002	1
	Bi	209		ug/L			2293546	2209126	0
	Th	232	4.509	ug/L	0.075	1	1512	177424	0
	U	238	0.687	ug/L	0.007	1	29	28794	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR32 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, November 16, 2012 18:50:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\111612.cal

Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			681751	689090	1
	Be	9	0.510	ug/L	0.032	6	8	1246	5
	C	13		ug/L			63994	88326	4
	Cl	37		ug/L			3532807	3647048	2
>	Sc	45		ug/L			674505	785565	2
	V	51	19.695	ug/L	0.191	0	6013	313316	1
	V-1	51	19.721	ug/L	0.266	1	387	309687	0
	Cr	52	12.965	ug/L	0.403	3	17778	194898	1
	Cr	53	13.228	ug/L	0.619	4	210	20863	2
	Mn	55	273.182	ug/L	14.494	5	314	5050392	3
	Co	59	4.563	ug/L	0.142	3	73	64781	1
>	Ge	72		ug/L			426798	429181	1
	Ni	60	12.483	ug/L	0.320	2	26	33406	1
	Ni	62	13.288	ug/L	0.169	1	48	5107	2
	Cu	63	11.833	ug/L	0.364	3	88	71136	1
	Cu	65	11.946	ug/L	0.357	2	42	32257	1
	Zn	66	50.870	ug/L	1.960	3	141	79873	2
	Zn	67	57.002	ug/L	1.246	2	21	15100	0
	Zn	68	53.822	ug/L	0.310	0	144	61192	0
	As	75	3.223	ug/L	0.044	1	220	4900	0
	As-1	75	3.210	ug/L	0.121	3	9153	13877	0
	Se	82	-0.135	ug/L	0.057	42	-1	-23	37
	Se	78	0.361	ug/L	0.240	66	9315	9514	0
	Mo	98	0.284	ug/L	0.020	7	35	1111	5
	Y	89		ug/L			271155	376051	2
	Kr	83		ug/L			529	793	1
>	In	115		ug/L			840042	838716	0
	Ag	107	0.133	ug/L	0.003	2	32	1487	1
	Cd	111	0.367	ug/L	0.043	11	72	1603	10
	Cd	114	0.191	ug/L	0.002	1	44	2027	0
	Sb	121	0.013	ug/L	0.003	22	346	517	6
	Sb	123	0.012	ug/L	0.003	24	257	374	7
	Ba	135	136.512	ug/L	3.336	2	17	514866	1
	Ba	137	135.903	ug/L	2.705	1	19	886658	1
>	Tb	159		ug/L			1001666	1004734	1
	Tl	205	0.084	ug/L	0.003	3	206	2841	2
	Pb	208	8.613	ug/L	0.179	2	157	346600	1
	Bi	209		ug/L			2293546	2240636	0
	Th	232	4.567	ug/L	0.089	1	1512	177985	0
	U	238	0.808	ug/L	0.009	1	29	33554	0